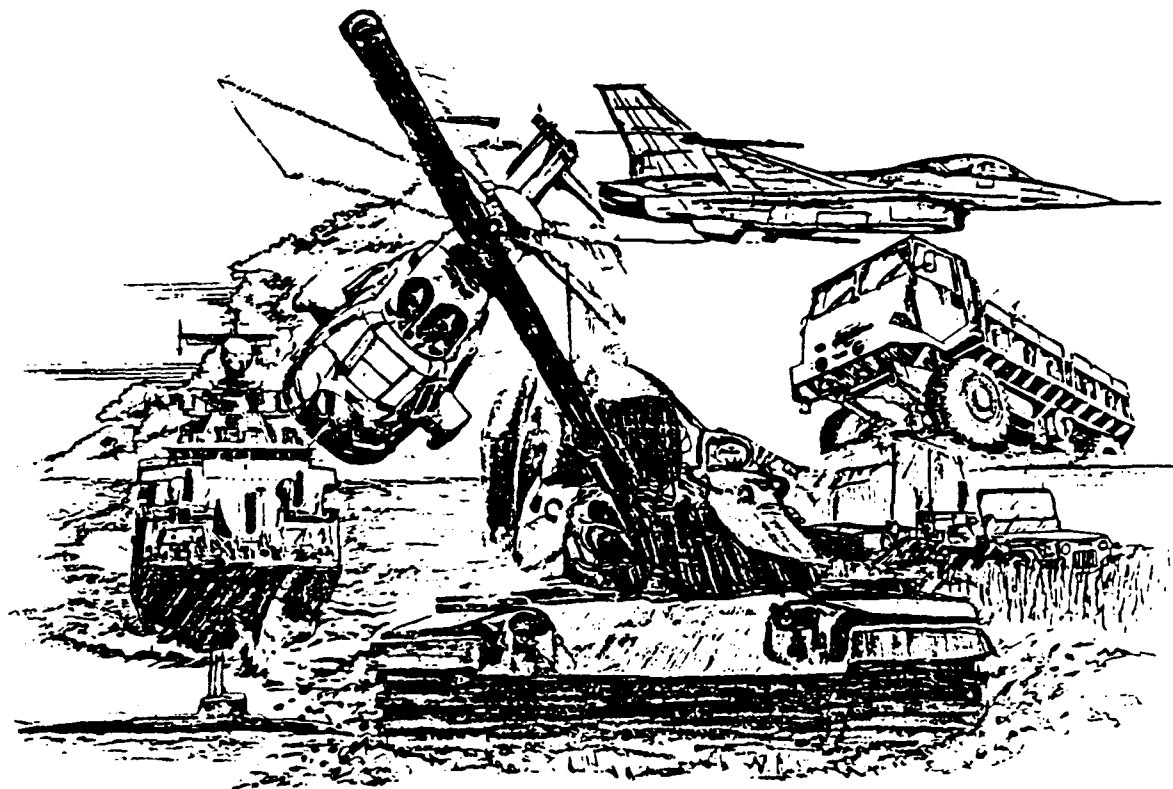


AD-A199 037



JOINT MATERIEL APPORTIONMENT AND ALLOCATION

Contract No. F49642-85-D0030-5013
and F49642-85-D0030-5023

FINAL REPORT

DISTRIBUTION STATEMENT A

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REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified			1b. RESTRICTIVE MARKINGS none		
2a. SECURITY CLASSIFICATION AUTHORITY n/a			3. DISTRIBUTION/AVAILABILITY OF REPORT unlimited		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE n/a					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) n/a			5. MONITORING ORGANIZATION REPORT NUMBER(S) n/a		
6a. NAME OF PERFORMING ORGANIZATION Systems Research and Applications Corporation		6b. OFFICE SYMBOL (If applicable) JCS/J-4	7a. NAME OF MONITORING ORGANIZATION		
6c. ADDRESS (City, State, and ZIP Code) 2000 15th Street North Arlington, VA 22201			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION Logistic Planning Division		8b. OFFICE SYMBOL (If applicable) JCS/J-4	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER F49642-85-D0030-5013 and F49642-85-D0030-5023		
8c. ADDRESS (City, State, and ZIP Code) The Pentagon Washington, D.C. 20301			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.
			WORK UNIT ACCESSION NO.		
11. TITLE (Include Security Classification) Joint Materiel Apportionment and Allocation					
12. PERSONAL AUTHOR(S) Robert Day, George White, William Cook, M. Bryant, Robert Miller, Robert Haythorne					
13a. TYPE OF REPORT Study		13b. TIME COVERED FROM TO		14. DATE OF REPORT (Year, Month, Day) July 1988	
15. PAGE COUNT					
16. SUPPLEMENTARY NOTATION n/a					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Logistics, Apportionment, Allocation, Supply, Materiel, JSCP		
19. ABSTRACT (Continue on reverse if necessary and identify by block number) During FY 87, the Studies, Concepts, and Analysis Division, Logistics Directorate, OJCS, contracted with the Systems Research and Applications (SRA) Corporation to examine the ability of the Services and the Defense Logistics Agency (DLA) to apply Joint Strategic Capabilities Plan (JSCP) materiel apportionment guidance during deliberate planning, and to allocate materiel in accordance with JCS guidance during execution. SRA developed a technical report, the <u>Joint Materiel Apportionment and Allocation Study (JMAAS)</u> , that provides an overview of current and proposed Service logistic systems and also provides an assessment of capabilities to support apportionment and allocation. The report findings reveal that the Services and DLA would encounter significant difficulty in implementing current JCS apportionment guidance to effect materiel allocation during execution. The JMAAS also identifies numerous opportunities for enhancing the development and implementation of materiel apportionment and allocation guidance and for the (see below)					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION unclassified		
22a. NAME OF RESPONSIBLE INDIVIDUAL Lt Col Dave Brown			22b. TELEPHONE (Include Area Code) (703)697-0595		22c. OFFICE SYMBOL JCS/J4-LPD

*exchange of materiel requirements and capabilities data.

JOINT MATERIEL APPORTIONMENT AND ALLOCATION

July 1988

**Final Report
TR-87-284-003**

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**Prepared for
Logistic Planning Division
JCS/J-4
The Pentagon
Washington, DC 20301**

**Under Contracts F49642-85-D0030-5013
and F49642-85-D0030-5023**

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Systems Research and Applications Corporation
2000 15th Street North
Arlington, VA 22201**

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JOINT MATERIEL APPORTIONMENT AND ALLOCATION

EXECUTIVE SUMMARY

Apportionment - The assignment to each unified Commander-in-Chief (CINC) of a stated percentage of available materiel worldwide based upon approved war planning scenarios. This is guidance for deliberate planning.

Allocation - The assignment to each unified CINC of a stated percentage of available materiel based upon a specific crisis. This is guidance for execution.

ES.1 BACKGROUND

Accurate logistic sustainability assessments have been an operations planning goal for many years. However, progress toward achieving that goal has been slow. While the development of detailed force deployment plans has progressed significantly since the establishment of the Joint Deployment Agency (JDA), there has not been a corresponding advance in logistics planning. Indeed, the development of supporting forces to be committed (Time-Phased Force Deployment Data--TPFDD) has reflected capabilities-based guidance, while logistic sustainability remains largely requirements-based. Accordingly, the theater commander may know how many aircraft and ships will provide the strategic lift to transport the units needed to execute a particular plan and where and when these units will arrive in theater, all with reasonable accuracy. However, that same theater commander does not have any reasonable assessment as to how much of the needed sustaining supplies will be provided to support theater Operation Plans (OPLANs).

Currently, the Department of Defense (DoD) planning community acknowledges that the Defense wholesale logistics base does not have sufficient materiel readily available in the depots to support the global family of OPLANs for the specified 180 days. Because of this, there has been considerable concern that any one Service or CINC could deplete the wholesale stocks of many items without regard to established national priorities. As an indication of this concern, the Joint Strategic Capabilities Plan (JSCP) now includes guidance for apportionment of

materiel (sustainment) assets among the CINCs, similar in context to the long-standing apportionment of strategic lift assets.

With the exception of the Army part, the JSCP apportionment guidance is limited to specific supply classes and does not include the commodities against which the bulk of multi-Service and multi-theater demands will be placed (i.e., Classes II - clothing/individual equipment, VII - Major End Items, and IX - repair parts). To be effective, materiel apportionment guidance must include those commodities which will be in the highest demand to ensure that sustaining supply support is provided to the highest priority Service or CINC. Further, the utility of current JSCP apportionment guidance for a CINC is questionable. A percentage of an unquantified amount of supplies is not particularly meaningful to a CINC or a component commander.

The Joint Materiel Apportionment and Allocation study examines the ability of the Military Service and logistics agencies to apply JSCP apportionment guidance for deliberate planning and to allocate materiel during execution. It was initiated and sponsored by the Logistic Planning Division (LPD), J-4, Organization of the Joint Chiefs of Staff(OJCS).

ES.2 PURPOSE

The purpose of this study is to:

- Evaluate the capabilities of current logistics systems (including logistic priority control systems, their methodologies, and their procedural effectiveness) to support apportionment guidance and implement materiel allocation decisions.
- Evaluate proposed logistics systems concepts and modifications to existing systems in support of materiel apportionment and allocation.
- Identify any revision to Joint, Service, and Defense Agency logistics policies and procedures necessary to implement a materiel allocation process.

ES.3 SCOPE

This study was initially limited to an assessment of whether materiel apportionment guidance could be implemented to support deliberate planning during peacetime. However, early in the analysis it was determined that materiel apportionment was dependent on the capabilities of Service and Defense Agency logistics systems. An equally important issue that surfaced was whether these systems could support allocation of supplies during a crisis. Thus, the study was expanded to include an examination of these systems. Additionally, the complexities of the logistics systems themselves and the broad range of DoD and Joint logistics instructions, directives, and proposed systems improvements required analysis. As the study progressed, other key related materiel apportionment and allocation issues were examined, e.g., on-going Service initiatives, the various critical items lists, requirements generation procedures, and logistics procedures during exercises. Although wide in scope, this study should not be construed as a total assessment of the entirety of materiel management systems, policies, and procedures. In fact, the conclusions and recommendations include issues from several areas that appear to be important to the implementation of improved DoD materiel readiness procedures. Further analyses in these areas may be required to complete the development of materiel apportionment and allocation policies and procedures.

ES.4 METHODOLOGY

This study was performed using a combination of document review and structured personal interviews and, in case of the Army, attendance at materiel allocation and exercise planning conferences. A determined effort was made to review key documents before interviewing authors or proponents to ensure the interviews were focused on the subject of concern -- apportionment and allocation of DoD materiel. The interviews further served as a means to expand the awareness of those being interviewed concerning other Service, organization, or agency efforts related to the subject matter. While planned as Phase I of the study, both documentation review and interviews continued throughout the project.

Phase II consisted of analysis. During this phase the team integrated the information obtained in Phase I to develop a clear definition of current operating systems, to evaluate their strengths and weaknesses, and to identify preliminary conclusions and recommendations. The preliminary conclusions were carefully

reviewed and, as various questions arose, additional data were sought to assist in the review process. The recommendations were also reviewed in the context of whether they are "doable".

Initially, the emphasis was on recommending improvements to the procedural aspects of the process rather than to policy issues. It was felt that such improvements, i.e., procedures and ADP processes, might be more easily implemented and that the availability of new capabilities would encourage policy changes needed to take advantage of those capabilities. However, as the study progressed, it became clear that certain policy issues must be addressed if the link between apportionment (guidance) and allocation (execution) is to be established. Therefore, the policy changes discussed are those that are crucial to improvements in apportionment/allocation and those that are needed to maximize gains from the recommended procedural improvements.

ES.5 DISCUSSION

ES.5.1 Procedural Issues

Although clarifying guidance issued to the CINCs and establishing systematic methods for determining requirements and setting priorities would improve logistics planning for military operations, the success or failure of execution depends upon the systems that the Services and DLA actually use to requisition, issue, and transport materiel. Several problems exist in the current systems that create the potential for misallocation of assets between theaters and Service components during multi-OPLAN scenarios.

The Uniform Materiel Movement and Issue Priority System (UMMIPS) establishes the framework for setting priorities for issue of materiel to units on the basis of assigned Force Activity Designators (FAD) and locally determined Urgency of Need Designators (UND). The combination of a unit's FAD and UND on a given requisition results in that requisition's Priority Designator (PD) which, in turn, controls the depots' issuing and the transporting agencies' processing and shipping schedules, respectively. The UMMIPS applies to all DoD requisitioners and Inventory Control Points, is logical, and is well understood by logisticians because it has been in use since the 1960s. In fact, it appears to work quite well during peacetime, handling the 30-40 million requisitions submitted annually with less

than a 10% backorder and rejection rate. There are, however, serious concerns over its ability to function effectively in a crisis situation.

The UMMIPS is a modified first-in, first-out batch processed, issuing system. Highest priority requisitions make up 41% of all peacetime requisitions. During the early stages of a crisis, however, many more units would be authorized to submit high priority requisitions in order to achieve wartime materiel readiness levels. A 1986 study by the Logistics Systems Analysis Office estimated that the requisitioning rate could be 3-4 times greater during a crisis than in peacetime. It follows that a greater number of high priority requisitions would be submitted and that UMMIPS could be overloaded. But, even if the system could handle the increased number of transactions, a more serious problem remains - how to discriminate between truly high priority requisitions and other priority requisitions, given the specific contingency.

Two factors make this discrimination critical to the success of military operations. First, significant shortages of both war reserve materiel and transportation assets exist. Obviously, if an abundance of both were available, then all requisitions could be satisfied within acceptable time standards. The second factor is inflated FADs that have evolved over time and contributes to the 41% high priority requisition rate. In a crisis it would not be possible to tailor the FAD system to the specific situation and assure that the units crucial to the success of operations would receive their materiel. Even with revised procedures, UMMIPS cannot distinguish between claimants with equal priority during a crisis. The combination of the two factors makes it possible that depot stocks could be drawn down to zero by less critical units submitting requisitions before the truly high priority units submit theirs. The only way to prevent this now is to abandon the automated system and to allocate materiel manually. However, the expected volume of requisitions in crisis would make it impossible for item managers to manage all critical items of supply through manual intervention. Moreover, item managers should not be left with decisions on priority by default; definitive guidance should come from the JCS.

Worldwide visibility over assets is also a critical element in planning and conducting military operations. Military Standard Transaction Reports and Accounting Procedures (MILSTRAP) specify how all DoD elements are to record wholesale and retail inventory transactions. It is important to have worldwide visibility over retail assets because significant amounts of materiel, especially

secondary items and spare parts which may be critical to military operations, are held at the retail level. Without adequate visibility, time-saving options for materiel reallocation and redistribution would not be discovered, or worse, materiel might be redirected without analyzing adequately the effect of the decision on operational capabilities.

The individual Service systems and procedures that would be used during a crisis also vary widely. For example, the peacetime supply systems for all Services and agencies operate on a "pull" basis, as indeed they would during war once mature theaters were established. However, the Army believes that, during the early stages of deployment and combat, units would not have sufficient usage history to ensure a constant flow of sustaining materiel under a "pull" system. The Army has therefore developed a number of "push" packages to support the various OPLANs. These are actually electronically stored requisitions, based upon wartime consumption estimates, which can be placed in the UMMIPS very quickly upon OPLAN execution. Because the other Services have not taken this approach, there is a high probability that the Army's demands would completely drain depot stocks of common-use items, leaving nothing for the other Services. In this case, the receiving CINC would have to devise procedures and systems that do not now exist to redistribute such items (shortages) once they arrived in theater.

Sequential OPLAN execution can also create severe problems. The UMMIPS cannot automatically reserve materiel for subsequent executions. Unless the various ICPs establish maximum order quantities on an item-by-item basis, it is probable that depot stocks would be depleted by earlier OPLAN demands, even if they were less important than later initiated OPLANs.

Several initiatives have been designed to address the shortcomings noted. The Defense Materiel Allocation System (DMAS), which would provide a priority filter for requisitions submitted under UMMIPS, is a concept that offers promise in the long term, but most DoD components believe DMAS is too complicated to be implemented quickly. Other system enhancements are taking place within the Services and DLA themselves, but these changes are being made without overall guidance or standardization, and they will not solve the DoD allocation problem.

ES.5.2 Policy Issues

There is a general belief that consolidated logistic guidance is inadequate. For example, only recently has materiel apportionment guidance been included in the Joint Strategic Capabilities Plan (JSCP). Although OJCS and Service planners realize that the CINCs have needed this type of guidance, the guidance provided so far consists only of percentages in limited classes of gross supply that the individual CINCs are to use in developing their operation plans. The problem here is that the CINCs do not have visibility over wholesale assets, and, therefore, cannot determine the actual quantities they should use in their planning. Stated percentages may give a general idea of which theater or plan has priority under a given scenario, but they do not, by themselves, support development of realistic plans.

The JSCP also requires the CINCs to assess the sustainability of their operation plans but does not specify how the assessments are to be performed nor what information they must contain. None of these assessments has yet been made, but without consistent guidance to follow, it is unlikely that the CINCs will submit consistent, and, therefore, comparable reports. Thus, although a great deal of effort will be expended developing them, the sustainability assessments will *not* provide a basis for systematic corrective action.

OJCS advice to the Services and to OSD can also be improved. Currently, OJCS communicates its views on critical items, requirements determination, and theater priorities via several different documents and mechanisms. Also, OJCS guidance for requirements determination is not sufficiently explicit. For example, only the Army and Marine Corps currently compute Class IX requirements at the National Stock Number (NSN) level of detail. The Air Force is developing a system that will compute subclass IXA resupply planning factors at the NSN level of detail. Thus, DoD-wide Class IX requirements may be understated, and since JSCP apportionment guidance applies only to items for which requirements have been computed at the NSN level of detail, may also lead to misallocation of assets during an actual emergency. This is because, although they do not develop operations plans themselves, the Services and the Defense Logistics Agency design and manage the systems that handle the bulk of the items required to implement them. Clear, concise OJCS guidance, issued to all of the Services and DLA and applied

consistently by them, is necessary to ensure that proper priorities will be addressed during emergencies.

One significant area that requires better JCS supervision is consistency in programming. For example, OJCS compiles and distributes the CINCs' Critical Item List (CINC CIL) which is based upon individual CINC inputs. These are developed subjectively rather than as a result of consistently applied analyses, and the compilation is done mechanistically without regard to the relative priorities of theaters or sustainability requirements. When critical items are identified by the CINCs, the JCS should ensure that they receive balanced treatment in the Service POMs. Likewise, when critical item shortfalls have been legitimately identified, the JCS must ensure that the CINCs adjust their OPLANs accordingly until the shortfalls have been corrected.

The Defense Reorganization Act of 1986 granted a more powerful role to the JCS in order to establish better centralized control and more decentralized execution of a wide range of DoD activities. For logistics plans, programs, and procedures, this means that the JCS should participate more directly and oversee more closely the activities of the separate Services and CINCs. The process must begin with the development of essential guidance and continue through the standardization of systems to implement that guidance, but it must be accomplished by better supervision of the activities undertaken by the various DoD components to address joint problems. JMPAB procedures are simply too inflexible to perform allocation/reallocation once a crisis begins. An effective means to accomplish allocation should be embedded in the automated supply system(s), transparent in peacetime, ready for implementation in wartime.

A comprehensive review of the means by which the JCS issues logistics guidance and receives feedback from the Services and the CINCs is needed. Many of the existing procedures can be consolidated or simplified.

ES.6 CONCLUSIONS AND RECOMMENDATIONS

Although we examined materiel management organization by organization, it is the ability to execute operation plans involving all those organizations that was most critical in developing our conclusions. Whereas each Service's systems may serve its peacetime purposes, the full adequacy of those systems must be judged

finally upon their capability to work in concert with the other Services' systems during a crisis. Existing Service and DLA systems evolved independently without this goal in mind, and they do not support either realistic operation planning or actual execution. It is fair to say that, with the possible exception of the Army, the Service and DLA systems today cannot implement materiel apportionment and allocation. Ensuring that emerging and future systems will satisfy these purposes is the proper role of the OJCS under the stated provisions of the Defense Reorganization Act of 1986.

The findings of this study fall into two major groupings: procedures and policy. The procedural findings deal with DoD systems concerning materiel planning and execution. The policy findings are those issues that are crucial to improvements in the apportionment and allocation of defense materiel. The findings are based on field research in the Office of the Secretary of Defense, the Service headquarters and logistics activities, and the Defense Logistics Agency. Some are within the purview of the OJCS to address, while others are Service/DLA issues that could be helped through JCS support. The several conclusions collectively indicate the following overall effects on US military capabilities:

- Senior leaders, including the CINCs, are not fully aware of real logistic constraints;
- There is no assurance that a major OPLAN can be sustained for more than 30 days;
- There is no assurance that materiel really critical to OPLAN support is currently identified; and,
- There is virtually no connectivity between war planning and mobilization planning.

The recommendations specifically address actions that:

- Establish goals for incorporating materiel allocation capabilities in the Services and DLA systems and procedures;
- Prescribe a consistent approach to identifying materiel items that are critical to planned warfighting capabilities;

- Establish safeguards to preclude unwitting depletion of essential materiel stocks; and,

- Develop a more integrated approach to logistic planning among the OJCS, the CINCs, the Services, and DLA.

The conclusions and recommendations (a complete list is found in Section 8 of this study), based on extensive discussion with logistic representatives at all levels in the DoD, are aimed at achieving a capability to allocate materiel judiciously during wartime. Materiel allocation is a vital issue. Peacetime defense budgets have never provided all the materiel needed to sustain wartime operations; therefore, the challenge in war is to win through effective use of what is available.

ES.7 REPORT ORGANIZATION

The report is organized into eight sections. The first six sections are a summary of the systems, policies, and procedures as they exist today and actions to improve them. Section 1 addresses OSD and OJCS activities; Section 2, the Army; Section 3, the Air Force; Section 4, the Navy; Section 5, the Marine Corps; and Section 6, the Defense Logistics Agency. Section 7 is a brief survey of related issues that are pertinent to the study. Section 8 contains the conclusions and recommendations. Following Section 8 are three appendices. Appendix A is a listing of documents reviewed; Appendix B is a listing of personnel who were interviewed or took part in the development of the study; and Appendix C is the distribution list.

SECTION 1

**THE OFFICE OF THE SECRETARY OF DEFENSE
AND THE ORGANIZATION OF THE JOINT CHIEFS OF STAFF
ACTIVITIES**

1. GENERAL

The Office of the Secretary of Defense (OSD) and the Organization of the Joint Chiefs of Staff (OJCS) are responsible for actions required today or proposed for the future to insure that the fighting forces are given the materiel they need to accomplish the national defense objectives. OSD, as an arm of the National Command Authorities (NCA), provides the national objectives and implementation guidance to the DoD components and, through the JCS, to the CINCs. OSD also sets the policy for the Department of Defense (DoD) supply system.

The OJCS uses broad OSD guidance concerning national priorities and reformulates it into specific guidance pertaining to the apportionment and stationing of forces and to the apportionment of air and sea transportation assets. Further, in times of crisis it has been the OJCS that has actually allocated forces, transportation assets, and, to a very limited degree, materiel. Procedurally, the allocation of materiel is addressed on a management by exception basis by the Joint Materiel Priorities and Allocation Board (JMPAB). However, logistic planners know that of the many materiel issues that will arise during a crisis, most may never reach the JMPAB or, if they do, they may not be resolved before the supply bins are emptied of many items.

Prior to 1986, operation planners had detailed force and transportation guidance but lacked materiel guidance. The FY 1986 Joint Strategic Capabilities Plan (JSCP) provided materiel apportionment guidance for the first time. (The definitions of apportionment and allocation in this report are based on usage found in the JSCP. The term "allocate" is sometimes used in the supply community to mean release for issue, but should not be confused with the JSCP usage.)

1.1 UNIFORM MATERIEL MOVEMENT AND ISSUE PRIORITY SYSTEM (UMMIPS)

1.1.1 Current

The UMMIPS is the system by which the requisitions of all organizations within DoD are prioritized in terms of their importance for support. It provides a ready means for expressing the relative rank of requisition and materiel movement transactions by a series of two digit codes known as priority designators (PD). The

PD is based upon a combination of two factors; the Force Activity Designator (FAD) and the Urgency of Need Designator (UND).

1.1.1.1 Force Activity Designator (FAD)

FAD assignments range from FAD I through FAD V. FAD I assignments are reserved for those units, projects, or forces which are most important militarily as determined by the JCS and approved by the Secretary of Defense. All other FADs are assigned according to the guidance found in DoD Directive 4410.6, Uniform Materiel Movement and Issue Priority System, dated October 30, 1980. (A revised DoDD 4410.6 has been staffed and will be issued in early 1988.) Responsibility for those assignments and the monitoring of those assignments is vested in the JCS. Since the JCS has delegated the assigning of FADs II through V to the Services, the JCS role has become that of monitor with the requirement to conduct annual audits of FAD assignments. Today, this role is not fulfilled; any auditing done is at the Service level. Therefore, there is no awareness of deviations from guidance or assurance of compatibility in FAD assignments by the Services and defense agencies.

1.1.1.2 Urgency of Need Designator (UND)

The Urgency of Need Designator (UND) is a priority consideration based on need. UND A indicates a unit cannot perform its assigned mission without the item on requisition; UND B indicates that the mission would be impaired without the item; and UND C is for routine replenishment. The criteria for UND A and UND C are quite clear; however, UND B is ambiguous and subject to interpretation by the requisitioner.

1.1.1.3 Priority Designator (PD)

Through the combination of an assigned FAD and the appropriate UND, a Priority Designator (PD) can be ascertained by the requisitioning activity. Table 1-1 indicates the 15 different PDs that can be derived from the various combinations of FADs and UNDs; however, each unit can normally choose from only three PDs. All depots group, pick, and pack materiel by Issue Priority Groups (IPGs) as opposed to the specific PDs assigned to the requisition. IPG I requisitions are for PDs 01-03; IPG II requisitions are for PDs 04-08; and IPG III requisitions are for PDs 09-15. To maintain the integrity of UMMIPS, unit IPG I and II (considered high-priority)

Table 1-1. Derivation of Priority Designators

FORCE/ACTIVITY DESIGNATOR		URGENCY OF NEED DESIGNATOR			
		A	B	C	
		IPG II			
I	IPG I	01	04	11	IPG III
II		02	05	12	
III		03	06	13	
IV		07	09	14	
V		08	10	15	

requisitions are restricted to the quantities necessary to satisfy the immediate end-use requirement. Unit requisitions for replenishment stocks are to be requisitioned under IPG III.

PDs can be modified by either project codes or designation as Not Mission Capable Supply (NMCS). Within a Service system, that Service's project codes are also honored; however, OSD or OJCS project codes take precedence over Service codes. A recognized project code will be ranked for processing purposes above all other requisitions with the same PD. NMCS is a materiel condition indicating that systems and equipment are not capable of performing assigned missions because a supply shortage has caused a maintenance work stoppage.

Thus, PDs provide the basis upon which the logistics community responds to the item needs and determines the means of transportation required. The system is not self-governing. There is no single control on the award of FADs to prevent system abuses. The use of UNDs is also open to the potential for abuse. In peacetime, these designators have a marginal effect; however, in a time of crisis,

when all claimants are scrambling to obtain their "share" of the resources, the effect of UND abuses could become significant. A study of the UMMIPS, done in January 1986 by the Logistics Systems Analysis Office (LSAO), found that the supply source used the IPG as a guide for picking and packing materiel and provided special handling to NMCS, IPG I, and IPG II materiel. The study also found that these constitute 41% of all peacetime requisitions. This high percentage of high priority requisitions in peacetime is indicative of abuse of FADs and UNDs.

UMMIPS, as it exists today, has serious shortcomings, especially if it is expected to provide a priority discriminator to insure supply to a high priority claimant in a crisis. This issue will be expanded in the discussion of the Defense Logistics Standard Systems (DLSS).

1.1.2 Future

A draft of the revised DoDD 4410.6, UMMIPS, has been staffed and comments have been received in OSD. The revision addresses many of the points raised by the LSAO study. It does not solve the problem of the wrong claimants clearing the shelves of items that are more urgently needed elsewhere. The revised directive still prescribes an only slightly modified first-in-first-out system. To reduce the likelihood of all assets being depleted before appropriate claimants submit their requisitions, the new directive requires that materiel managers establish control levels in order to reserve stocks of critical items for IPG I and NMCS requisitions. However, since any FAD I, II, or III designated organization can initiate IPG I or NMCS requisitions, the sole effect of this requirement is to preclude non-NMCS IPG II and IPG III requisitions from making claims against these reserve stocks.

1.1.2.1 Controls

The new draft DoDD 4410.6 retains the OJCS responsibility for annual audits of each FAD I assignment for continued validity. The OJCS is also responsible for periodic reviews of FAD assignments not delegated to other DoD Components (e.g., FADs for joint programs and for foreign countries). These audits and reviews have not been performed in the recent past, and a revitalized program to carry out these responsibilities is needed.

Justified whenever the organizational mission is impaired, UND B provides an easy way to qualify a requisition as IPG II for high priority handling and

transportation. The LSAO UMMIPS study found that 61% of the high priority requisitions challenged by the depot transportation officers were downgraded from air to slower and less expensive surface modes. This led the LSAO study team to conclude that many requisitions were submitted as high priority merely to obtain release for issue rather than for speed of receipt. The proposed directive recognizes the LSAO conclusion concerning high priority abuse by requiring DoD Components, inter alia, to:

- Conduct continuing internal training programs to ensure effective operation and accurate application of the UMMIPS;

- Maintain programs of command and administrative audits and inspections to review internal operations with the objective of eliminating and preventing abuses, misapplication, and misinterpretation of the UMMIPS;

- Enforce accurate use of UMMIPS through applicable disciplinary action for deliberate misuse of the system; and,

- Conduct annual reviews to validate the propriety of FADs assigned to units in the DoD Component.

If carried out as intended, these controls can do much for the effective operation of the UMMIPS. Nevertheless, the UMMIPS is not designed, nor was it intended, to perform allocation.

1.2 DEFENSE LOGISTICS STANDARD SYSTEMS (DLSS)

1.2.1 Current

The DLSS consist of 14 standard systems that encompass five major functional areas: requisitioning, inventory management and control, transportation, contract administration, and specialized functions. The governing document for the DLSS is DoD Directive 4000.25, Administration of Defense Logistics Standard Systems.

Of importance to apportionment and allocation are two of the primary systems, Military Standard Requisitioning and Issue Procedures (MILSTRIP) and Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP), and one of the specialized functions, the Defense Automatic Addressing System (DAAS). The

DoD Activity Address Directory (DODAAD) and the Military Assistance Program Address Directory (MAPAD) both support the DAAS.

During peacetime, some 90% of all requisitions are processed in a timely manner according to the LSAO study. Lower peacetime demand results principally from maintaining units at reduced levels of operations, readiness, and manning. However, in times of crisis those readiness deficiencies must be corrected quickly. The LSAO study also indicates that under normal peacetime conditions, the wholesale supply system processes between 30 and 40 million requisitions per year. Since approximately 90% are handled within the UMMIPS time standards, the annual rate of 30-40 million requisitions would mean that 3-4 million requisitions are delayed on backorder or due-in.

For peacetime operations this has only a limited effect on units and readiness. The effect in a time of crisis is not known. However, estimates of the number of expected requisitions indicate an annual submission rate of three to four times the peacetime quantity. Consequently, the number of requisitions may balloon to 90-160 million and if current trends continue, 41% will be IPG I or II requisitions. This represents 36 to 64 million high priority requisitions, more than the total number processed today. It is expected that the greatest number of requisitions would be submitted in the first 60-90 days of the crisis and that there would be an increase in high priority requisitions. This expectation, combined with the limited stockage levels and, for many items, the long lead times for procurement, are causes for concern. There will not be enough materiel to satisfy all demands and the only means available to control those demands are the DLSS.

The DLSS are designed to govern transactions in the DoD wholesale materiel system, but materiel that is wholly within the purview of a Service is also subject to Service systems and rules. Consequently, DLSS will not provide complete visibility over materiel once it enters Service retail systems.

The system for monitoring inventory is MILSTRAP, governed by DoD 4140.22-M, which directs all supply distribution systems, whether inter- or intra-Service/agency, to use specified codes, forms, formats, and procedures. There are exceptions to this broad requirement; in particular, transactions at a post, camp, station, base, or equivalent and also certain categories of supply. However, posts, bases, or equivalents are required to follow MILSTRAP when transmitting asset

status information based upon required reports or queries. Thus, it is possible to determine asset data down to the post, base, or equivalent level, though such data is normally maintained only at the storage activity level. In an action related to the MILSTRAP, the Services have been tasked by OSD to develop an automated capability to give inventory managers DoD-wide visibility over both wholesale and retail stocks, including secondary items, down to the lowest supply echelon. (This project is addressed in the DLSS "Future" section.) Therefore, an element needed to support apportionment and allocation is tentatively in place today.

MILSTRIP (DoD 4140.17-M), another support element of DLSS, governs requisitioning and issue procedures. It states that demands will be sequenced for priority of processing based upon PD and then within PD by use of the other codes, such as OSD/JCS project codes and NMCS designation. However, as practiced by the depots and discussed under UMMIPS, requisitions are processed by IPG. Any requisition designated for expedited handling receives the same special handling. Thus, the actual PD means little once the IPG is assigned.

Thus, the final control on priority of issue is at the requisitioning installation as specified in Appendix B14 of MILSTRIP. The demands of mission accomplishment at the installation will probably result in higher priority requisitions. Consequently, under the current system, priority is established by personnel at the lowest organizational level.

Further compounding the lack of control is the method of implementation. Today's system is an antiquated 80 column card format, batch processed requisition submission and processing system. The requisitioning installation submits a "batch" of requisitions and the receiving Inventory Control Point (ICP) processes a "batch" of requisitions. While the submission batch has little significance, because the requisitions will be flowed to a number of ICPs, the processing of a batch at the ICP is important. There, requisitions within the same batch compete on the basis of PD. But, the importance of the PD can be diminished by the size of the batches the ICP processes. For example, if 10,000 requisitions were processed in one batch, then the highest PDs would be filled first, but if the same requisitions were processed in ten sequential batches, the fill would be based on the chronology of processing up to the point of "stock out". If adequate stocks exist, then the PD affects only the mode of transport selected since all items will eventually be shipped; but, if adequate stocks

are not on hand, and sequential processing is done, then lower PD requisitions can be filled and higher PD requisitions remain unfilled.

In addition, the majority of forces qualify under UMMIPS as FAD I, II, or III by virtue of OCONUS stationing or being deployable under one or more OPLANs. The priority is equal for units stationed or deployable anywhere in the world, even though national priority may place greater emphasis on one area than another. Thus, there is no discrimination between requisitions containing the same PD, even though there may be a real world difference in their national priority.

There are currently two methods available to provide controls to ensure that the true high priority claimants will have materiel available to be claimed. The first of these permits the establishment of control levels so as to reserve assets for requisitions with designated ranges of PDs. Most of the Services use past demand history to establish these control levels. However, this methodology does not differentiate between geographical claimants, and in many instances an IPG I requisition can take the bin level to zero. The second of these methods is JCS-approved projects or firm commitments for delivery of materiel to a Military Assistance recipient. Except for Military Assistance, the use of JCS project codes currently provides the only method to establish priority claimants based upon a crisis scenario.

JCS project codes are Category D codes and apply to both OSD and JCS designations. Using a three place alphanumeric code with the first digit 9, Category D project codes elevate requisitions upon which they appear above other requisitions with the same PD in the batch being processed by an ICP. They do not, however, move the requisition above requisitions with a higher level PD. Since most requisitions are drawn for issue on an IPG basis, it is possible that a PD 03 requisition with a JCS project code will be pulled for issue before a PD 01 requisition. This, however, is the only way that a requisition for a deploying unit can get priority over a requisition with the same PD from a less critical unit. Of course the deploying unit would only have priority over the less critical unit if the two requisitions were processed in the same batch. Related to both of the control methods is the use of Maximum Release Quantities (MRQ), which govern the amount of materiel any one customer may draw from the system and are established by each Service and

Agency. Thus, the use of project codes for apportionment and allocation appears to be only marginally effective.

Communications support for the DLSS is an essential element of the materiel distribution process. This capability is currently provided by the Defense Automatic Addressing System (DAAS). The DAAS has two service centers, one in Tracy, California, and the primary center at Gentile Air Force Station, Dayton, Ohio. The DAAS performs editing functions on logistics documents and ensures they are properly routed through AUTODIN. The DAAS processes around 750 million 80-character card image transactions a year in normal peacetime operations. If the expected expansion of requisitions applies to total transactions, then the DAAS could be called on to process transactions at an annual rate of 2.2 to 3 billion 80-character card image transactions during wartime.

Because of its editorial capability, the DAAS is the point where requisitions entered into MILSTRIP could be reviewed to establish controls during times of crisis. While modifications would be required, the DAAS also offers an automated means to preclude abuses of the priority system by validating the PD of a requisition against the authorized FAD of the submitting organization. The system could be programmed to reject a requisition with a PD that is inconsistent with the authorized FAD. This could be coupled with strengthening UMMIPS educational programs in the Services to promote priority awareness and sensitivity. Yet another alternative is to require the Services/Agencies to establish UIC against PD edit checks in their operating systems that generate requisitions.

1.2.2 Future

The Secondary Items Weapon System Management concept is an OSD initiated effort which requires the Services to develop concept implementation plans. This area of materiel management is crucial to operational readiness and the ability to sustain operations in times of crisis or war. Specifically, each Service has been directed to develop an automated capability for the Integrated Materiel Manager (IMM) to have current DoD-wide asset visibility down to the lowest supply level. This capability should enable item managers to better assess asset availability, identify potential materiel shortfalls, and take action to correct those shortfalls.

Such a capability is essential to effective wartime allocation/reallocation of critical secondary items.

The update to the DLSS, called the Modernization of the Defense Logistics Standard systems (MODELS), is currently being developed. The basic concept has been defined and is being staffed. The principal changes proposed, in addition to updating hardware and software, are (1) to do away with the 80 column transaction format, thereby permitting on-line, variable-length format inputs to the system, and (2) to change the communications network. Rather than the DAAS with its two nodes, the plan is to create a Logistics Gateway Node (LGN) at each major logistics installation. This network will perform all the current DAAS functions, plus convert local system formats to MODELS standards. Each LGN will transmit traffic through the Defense Data Network (DDN). There will be a central LGN, located in CONUS, that will perform software maintenance for all LGNs and act as the headquarters for LGN operations.

The on-line, interactive system envisioned will permit querying of wholesale and retail activities worldwide. The concept, as defined, goes a long way toward providing the logistic analysis capabilities specified for the Joint Operation Planning and Execution System (JOPES) and some of the needs of the OSD program for Secondary Items Weapon System Management.

What the on-line, interactive MODELS does not address are the deficiencies in the current requisition priority system. If the Services and agencies open their wholesale and retail asset data bases for items and their substitutes with multi-Service requirements, then the OJCS will find it easier to provide apportionment data in the JSCP and will be better able to determine assets available for allocation. However, the ability to control release for issue is unaffected by MODELS. There is still no method or procedure to discriminate between requisitions with the same PD, to ensure that the true priority claimant receives first call on available materiel.

MODELS will provide the mechanism for implementing an issue control system. The central LGN and its system maintenance capability provide the means to rapidly emplace or activate such a system. It is currently envisioned that the LGN network will be operational in March 1993.

1.3 DEFENSE MATERIEL ALLOCATION SYSTEM (DMAS)

The Defense Materiel Allocation System (DMAS) is described in an OSD concept paper entitled Stock Allocation in Wartime. The paper was sent to the Services, agencies, and JCS for comment in May 1987. Comments have been received, but as yet no further action has been taken.

The genesis of the concept was concern for the lack of an automated system or procedure to allocate limited supplies of secondary items, such as spare and repair parts, among high priority claimants during mobilization. Currently, in a crisis, DoD must rely on the automated standard supply systems, the DLSS, used during peacetime. Yet, as already noted, these systems operate on a near "first-come, first-served" basis. It is a function of the JMPAB to allocate and reallocate materiel between the CINCs. However, under current procedures, it is almost impossible for the JMPAB to render time-sensitive decisions, or to consider more than a few items at a time. Therefore, in times of crisis the item manager is placed in the position of allocating supplies -- decisions driven more by resource availability and "fair-sharing" of those resources rather than by regional priorities. Consequently, there is a need to have an automated system that can be activated in times of crisis to allocate materiel in accordance with NCA priorities.

The DMAS is potentially such a system. While not an allocation system as allocation is defined at the beginning of this document, it can provide the national priority claimants access to available stocks, while restricting the access of other claimants.

The DMAS concept, which deals with the wholesale level of supply, divides requisitions into two categories. Category 1 requisitions are those that the national level has defined as priority requisitions that can be processed without delay. In other words, the system will permit available wholesale stocks to be released for issue against Category 1 requisitions. Category 2 requisitions, those not granted a national priority, would be held for a specified period of time before being processed. In both categories, the UMMIPS defined PD would be used to prioritize the requisition when processed.

The division of requisitions into Categories 1 and 2 would be accomplished by an edit matrix located at the DAAS nodes and ICPs in the current DLSS and at the

Logistics Gateway Nodes (LGN) in the planned MODELS. The matrix would be two-way with one axis identifying the materiel whose release for issue is to be controlled and the second axis identifying authorized requisitioners or recipients. Any requisition passing the edit check for an authorized requisitioner and then passing a controlled materiel edit check would be released for issue. Table 1-2 displays an example of a matrix with type data element names used rather than actual data.

Table 1-2. Release to Issue Matrix

	DoD Compon- ents	Non-DoD Customers	Theater	Geo- graphic Area	Country	DoD Activity Address Code (DODAAC)	Project Code	Issue Priority Group and PD
Federal Supply Class (FSC)	X		X				X	
National Stock Number (NSN)	X	X	X	X	X	X	X	X
Multi-Service Use Items	X		X				X	
Critical/Essential Items	X		X		X	X	X	X
War Reserve Items	X		X				X	

Where an X appears in the matrix, a requisition meeting the edits would be permitted to pass as a Category 1 requisition; those not passing would be held as Category 2 requisitions.

The DMAS offers a methodology for the NCA to control the issue of critical materiel to priority claimants, a capability that does not exist today. Control may range from macro to micro level of detail; however, the procedures for developing such guidance are not specified. How this guidance would be developed and issued is a JCS issue.

Although simple on the surface, implementation of this matrix approach can rapidly become complex. For an example, we will use the Theater-Critical/Essential Items cell. The theaters will be defined as Southwest Asia (SWA), Europe (EUR),

and Southeast Asia (SEA) with the M1 tank, A10 aircraft, and AIM missile as Critical/Essential Items. The crisis will be defined as occurring in SWA, so the guidance might be to permit SWA and EUR to draw M1A1s and AIMs, with no restriction on A10s. Under those conditions, all theaters could requisition A10s and have them released for issue; however, if a unit in SEA tried to requisition either an M1A1 or an AIM, the requisition would not pass the edit and would become a Category 2 requisition. This simple example, with a limited number of theaters and items of concern, takes considerable guidance to execute. Guidance for the full matrix would be extensive, if implemented at the item level.

The current "allocation" organization within the OJCS, the JMPAB, is not structured to provide the initial guidance and would find anything more than very limited fine tuning of the matrix difficult to accomplish. The JMPAB, as a reactive body, is essentially prepared to address a single issue or very few issues at a time.

For this concept to work, one critical assumption is made: that the national decision makers will have sufficient advance information to issue the guidance. The definition of sufficient information depends upon (1) one's viewpoint, manager versus logistician; (2) the period of the crisis evolution; and (3) depth of the global intelligence estimate. It is also assumed that the broad crisis overview can be translated into DMAS matrix input parameters.

One piece of guidance the national level must provide is the period of delay before a Category 2 requisition is released to continue processing. This is a key point because at that time, Category 2 requisitions could again compete, based on their PDs, against Category 1 requisitions for any remaining or in-bound resources. After the "aging" period of the first batch of requisitions, i.e., imposition of this system, one difference between a Category 1 requisition and a Category 2 requisition is the Category 2 requisition has been delayed for a period of time and carries a lower priority. A second difference that may apply to a Category 2 requisition is that it may only draw from a limited amount of materiel.

As discussed, even a concept that appears simple in macro terms can rapidly become complex in execution. From the manager's viewpoint, complexity should be minimized. The national level decision maker does not have, nor should he have, the vast amount of information necessary to provide the guidance to build a highly complex matrix, though the logistician would likely appreciate such guidance. In

implementation, initial guidance probably would be limited to defining the category of a requisition in terms of the forces by theater or region, the OPLAN affected by crisis, and in broad materiel categories such as Federal Stock Classifications (FSC). For DMAS to be successful, the matrix and variables must be established in peacetime, for a range of scenarios, and placed in the ADP system transparent to peacetime operations.

1.4 JCS APPORTIONMENT GUIDANCE

The JCS have recently added apportionment guidance for other than critical items to the Joint Strategic Capabilities Plan (JSCP). The purpose of the apportionment guidance is to provide the planners with advice concerning the proportional distribution of available materiel to be expected under a global or any of five regional war scenarios.

The guidance pertains to all logistics support organizations, including the Services, DLA, and single commodity managers. It directs the generation of requirements, the sourcing of those requirements, and finally, the apportionment of existing resources for planning purposes. *No specific provision is made to go from the peacetime/deliberate planning apportionment scheme to implementable allocation guidance needed in a time of crisis.* It might be assumed that the apportionment data would be adopted as the initial allocation data, subject to amendment as appropriate. Without such an assumption, this concept appears to be deficient. Further discussion will reveal other deficiencies, although the addition of apportionment guidance is certainly a long-overdue start in addressing the problem.

The establishment of apportionment levels is a three step process consisting of computing requirements, sourcing those requirements, and finally apportioning available materiel resources among competing CINCs.

The first step is to determine requirements. The basis for requirements determination is the force list from the OPLAN that applies to the scenario under study. From the force list, the CINC, his component commanders, or the Services compute force materiel requirements. The requirements will be calculated based upon the CINC's concept of operation, the forces to be employed, the expected combat intensity level or sortie rate, and the expected duration of the operation. In accordance with current apportionment guidance, requirements, including JCS-

directed safety levels, are to include U.S. Forces, support of the military forces of other nations, and emergency support for the local population. However, the only requirements carried forward to the next step, sourcing, are those for the U.S. Forces.

The current process of requirements determination does not address U.S. logistic support for foreign nations notwithstanding established guidance on this subject. JCS strategic planning guidance notes the need to address logistic support for combined forces operations and to identify and prioritize foreign military and civilian support requirements. The need to consider allied requirements for U.S. logistic support is also cited in DoD Directive (DoDD) 2010.8, "Department of Defense Policy for NATO Logistics," 12 November 1986; and a proposed DoDD, "Support to and from Allied and Friendly Countries During Emergencies, Crises or Wartime," (draft of 14 April 1987). DoDD 2010.8 prescribes JCS responsibilities to recommend measures for resolving materiel shortages and deficiencies for U.S. and NATO forces and priorities for satisfying their logistic requirements. The proposed DoDD would require extensive effort to determine estimated foreign requirements for U.S. logistic support and incorporate this information into data bases and the deliberate planning process. The current lack of such data precludes an accurate assessment of the total demands for U.S. logistic support.

Based upon the CINC's materiel requirements for those items calculated at the NSN/DODIC level of detail, the logistics agencies will determine the availability of the materiel through sourcing. There are 12 sources of supply identified in the JSCP, to be used in priority order. Obviously, the first source of materiel is what is available in theater and the last source is "excess" materiel held by another CINC (see Table 1-3 for a prioritized list of sources). Determination of the sourcing is a combination of CINC and wholesale supply inputs. While the CINC does not include foreign military and civil requirements in those to be sourced, he must include foreign or Host Nation Support (HNS) resources if they are part of an agreement or are under contract. If he chooses not to count HNS materiel as a resource, he must provide justification for that position.

With requirements and sourcing, it is now possible to provide apportionment guidance. Through the sourcing process, overages or excess stocks assigned to or held by one CINC can be reassigned to a CINC having a shortfall or to a CINC having a higher priority in the national defense scheme. This balancing process

Table 1-3. Prioritized Source List

<u>Priority</u>	<u>Source</u>
1	In-theater peacetime stocks
2	Accompanying supplies
3	WRM within organic transport range of using unit
4	Host Nation Support, in particular that covered by agreements
5	WRM not within range of using units
6	Stock on prepo-ships/MPS
7	Wholesale stocks outside CONUS
8	Theater industrial production, particularly that covered by agreement or contract
9	CINC dedicated stocks held in CONUS
10	Wholesale CONUS stocks
11	CONUS industrial production
12	Excess stocks held by another CINC

results in an apportionment of available materiel resources to the CINCs. The apportionment is, it must be remembered, for planning purposes only. It does not place labels on the stocked materiel or "fence" them in any way. Materiel is not relocated, though as experience is gained with the system and a better understanding of the global scenario and its relationship to the five regional scenarios is achieved at all levels, it might be expected that an improved worldwide storage concept could be developed and implemented.

As noted earlier, the JSCP apportionment process applies only to items for which requirements are calculated at the NSN/DODIC level of detail. This raises two critical issues: for what classes of supply is this necessary; and, for what classes

or subclasses of supply do the Services calculate requirements at the NSN/DODIC level. Under JOPS and its successor, JOPES, the primary focus has been on transportation. As a result, the requirements generators, namely the Movement Requirements Generator (MRG), produce primarily bulk outputs that cannot be sourced other than in kind, i.e., in bulk. This leads to the question of what must be sourced or apportioned. Sourcing has two purposes: determining if there is enough of the essential items, which requires NSN data; and refining transportation movement requirements, which requires tonnage data.

Classes I, III, IV, V, and VIII are, for the most part, handled by a single commodity manager, are well defined, highly dependent upon the force structure, and are managed by specialized groups of managers. See Table 1-4 for Classes of Supply. With the exception of the highly sophisticated, very expensive munitions and certain high use conventional munitions, there is little problem with the apportionment and allocation of these classes of supply, even though certain munitions items will be in short supply.

Classes VI and X are not significant in the early stages of any crisis. Thus, apportionment, and subsequently allocation, most directly apply to Classes II, VII, and IX. Of those three classes, Classes II and VII contain only a limited number of items that might become available during the early stages of a crisis. Class VII, Major End Items, while very critical, are intensively managed by the Services. The result is that apportionment, when carried through to specifics, is most critical for Class IX, the largest and most complex supply class.

For the key classes of supply, II, VII, and IX, the Army is now able to calculate requirements to enable sourcing and apportionment. The other Services are doing work in this area since each has developed a plan to implement the Secretary of Defense's Secondary Item Management for Weapon Systems Concept. The Marine Corps computes Class IX requirements using the War Reserve System and the Air Force is developing the Resupply Planning Factors Data System that will compute subclass IXA in its initial phase. Such plans are to be on line starting in the mid-1990s, so it can be expected that all Services will eventually have the capability to calculate requirements at the NSN/DODIC level of detail.

Table 1-4. Classes of Supply

Class I	Subsistence.
Class II	Clothing, individual equipment, tentage, organizational tool sets and tool kits, handtools, administrative and housekeeping supplies, and equipment.
Class III	POL, petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquid and compressed gases, bulk chemical products, coolants, deicing and antifreeze compounds, together with components and additives of such products, and coal.
Class IV	Construction. Construction materials to include installed equipment and all fortification/barrier materials.
Class V	Ammunition. Ammunition of all types (including chemical, biological, radiological, and special weapons), bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items.
Class VI	Personal demand items (nonmilitary sales items).
Class VII	Major end items. A final combination of end products which is ready for its intended use; e.g., launchers, tanks, mobile machine shops, vehicles.
Class VIII	Medical materiel, including medical-peculiar repair parts.
Class IX	Repair parts (less medical-peculiar repair parts). All repair parts and components to include kits, assemblies, and subassemblies, reparable and nonreparable, required for maintenance support of all equipment.
Class X	Materiel to support nonmilitary programs; e.g., agricultural and economic development, not included in classes I through IX.

SECTION 2
U.S. ARMY ACTIVITIES

2. GENERAL

In 1962, the Army underwent a major reorganization that completely realigned its supply system. The technical services were reduced or eliminated and their former materiel functions were centralized in the U.S. Army Materiel Command (AMC), formerly the U.S. Army Materiel Development and Readiness Command (DARCOM). With the exception of medical supply, AMC is the principal wholesale supplier for Army managed items.

AMC consists of a nationwide network of installations, sub-installations, and separate units. It is responsible for life-cycle materiel functions including research and development; test and evaluation; procurement and production; storage and distribution; inventory management; maintenance; and disposal for Army managed materiel. With headquarters in Alexandria, Virginia, it operates through major subcommands and directs the activities of depots, laboratories, arsenals, maintenance shops, proving grounds, test ranges, and procurement offices throughout the United States. The major subordinate commands (MSCs) and Inventory Control Points (ICPs) are shown in Table 2-1.

In addition to the MSCs there are two other AMC organizations that perform critical logistic functions.

- Logistics Control Activity (LCA). AMC Logistics Control Activity (LCA), located at the Presidio of San Francisco, California, provides visibility on individual requisitions and shipments as they are processed throughout the Army's logistics pipeline using the Logistics Intelligence File (LIF). The LIF is a centralized computer-oriented data base containing supply and transportation data on Army-sponsored requisitions submitted to the wholesale supply system. The LCA provides inquiry-response services for near real-time supply and transportation status and logistics management reports to activities from the supply support activity level to HQDA. Additionally, the LCA functions as the Army's airlift clearance authority, controlling all Army shipments into the Military Airlift Command (MAC) system and forecasting both long- and short-range over-ocean cargo requirements for AMC and DA into air and surface transportation modes.

Table 2 -1. AMC Major Subordinate Commands and Activities

SUBORDINATE COMMAND	LOCATION	SUB-INSTALLATIONS
Armament, Munitions and Chemical Command (AMCCOM) *	Rock Island, Illinois	2 R&D Centers 4 Arsenal 30 Ammunition Plants Defense Ammunition Center and School
Aviation Systems Command (AVSCOM) *	St. Louis, Missouri	1 R&D Center 5 Research and Technology Activities 3 Army Plant Representatives 2 Army Aircraft Plants Army Support Center
Communications Electronics Command (CECOM) *	Ft. Monmouth, New Jersey	2 R&D Centers 2 Activities Flight Test Detachment Communications Security Logistics Agency Electronics Materiel Readiness Activity
Depot System Command (DESCOM)	Letterkenny Army Depot, Chambersburg, Pennsylvania	13 Depots 7 Depot Activities
Laboratory Command (LABCOM)	Adelphi, Maryland	2 Laboratories 2 Research Facilities
Missile Command (MICOM)*	Redstone Arsenal, Alabama	1 Missile Plant
Tank-Automotive Command (TACOM) *	Warren, Michigan	Arsenal, Storage Facility, Tank Plant, Support Activity, Research Center
Test and Evaluation Command (TECOM)	Aberdeen Proving Ground, Maryland	5 Proving Grounds 3 Test Activities/Centers 2 Missile/Launch Ranges
Troop Support Command (TROSCOM) *	St. Louis, Missouri	2 Development & Engineering Centers Army Support Activity
AMC-Europe (AMC-EUR)	Hammond Barracks, Seckenheim, West Germany	40 activities
AMC-Far East	Seoul, South Korea	---
Security Assistance Center (USASAC)	Alexandria, Virginia New Cumberland Army Depot, PA	---
Electronic Materiel Readiness Activity (EMRA) *	Warrenton, Virginia	Supports INSCOM & SIGINT/EW units
Communications Security Logistics Activity (CSLA) *	Fort Huachuca, Arizona	Supports Communications Security Equipment

*Inventory Control Point

- Automated Logistics Management Systems Activity (ALMSA). This activity, located at St. Louis, MO, is the central systems design activity of HQ AMC. ALMSA is responsible for designing, integrating, programming, testing, documenting, installing, and maintaining standard ADP systems. As such, ALMSA has developed and maintains the Commodity Command Standard System (CCSS). This system, composed of several sub-systems, is installed at all AMC materiel readiness command elements and provides support in all functional areas of logistics management, including the Army's wholesale life-cycle materiel operation.

2.1 CURRENT SYSTEMS/CAPABILITIES

The Army's automated major items and supply systems have been evolving from commodity-oriented management plans to major items and weapons systems management. These systems were originally developed to support either retail or wholesale environments rather than the Army as a whole. Keyed to management of items utilizing Standard Study Numbers (SSNs), Line Item Number (LINs), and National Stock Numbers (NSNs), these batch-process oriented systems are limited by a data base design that restricts users from tailoring information to changing requirements. A number of programs are underway in an effort to enhance and modernize system capabilities.

2.1.1 US Army Logistics Plans

In addition to using MILSTRIP procedures and UMMIPS priorities to satisfy logistic support requirements, the Army prepares a Logistics Plan (LOGPLAN) to support each Operation Plan (OPLAN). The LOGPLAN identifies logistic support requirements based on the Time Phased Force Deployment List (TPFDL) and the number of days of supply needed to support the applicable OPLAN. Each Army ICP maintains magnetic tapes containing LOGPLAN data that permits rapid preparation of requisitions for individual items managed by that ICP, by NSN, required to support specific OPLANs. Also, the Army's Service Item Control Centers (SICCs) maintain similar magnetic tapes for DLA-managed items for which the Army has computed requirements. In both cases, the items computed are in support of Army units only.

The LOGPLANS will allow the Army to "push" materiel to deploying or deployed forces in a time phased manner. Due to the lack of retail asset visibility, more materiel may be "pushed" to the field than is required during the early phases of a contingency operation. This Army system has the potential to deplete many assets before other Services are able to submit their requisitions.

Together, the Army and DLA control 87.3 percent of the more than one million multi-Service items in the wholesale system. Thus, for the vast majority of multi-Service items, the Army's "push" system may empty the bins well before the other Services' "pull" system requisitions are processed.

2.1.2 Exercise Capability (EXCAP)

The EXCAP system is a check on the adequacy of the pre-positioned automated data at each of the ICPs to support the LOGPLANS/OPLANS being exercised. Major uses of the EXCAP system are to:

- Validate logistic requirements for an OPLAN.
- Validate the adequacy of requisitions by checks on rejected and passed requisitions.
- Insure all LOGPLANS have required data to support rapid initiation of requisitions.
- Support budget requests.
- Check AMC supply performance by Major Subordinate Command.
- Validate wartime workload projections.
- Check tape library procedures to insure that tapes are available and useable.
- Brief command group on levels of supply performance during exercises.

When AMC runs EXCAP, scenario-oriented requisitions are processed for a 30-day period and include all items in the AMC supply system. During a recent test of EXCAP the major findings were:

- Cost of 30 days of sustaining supplies for Army-managed items to support the scenario was \$58 billion.
- As shown in Table 2-2, the overall fill by quantity was 48% and by dollar value only 6%.
- Requirements were received from only 10 of the 51 mobilization stations.
- Percent of fill by selected items of supply are shown in Table 2-3. Percent of quantity fill can be deceiving as a measure of supply performance. Dollar value is perhaps a better gauge as it more clearly reflects shortages of large dollar value items, such as Classes V and VII.
- Supply performance for ammunition should be expressed in both small and large caliber. To use an overall average can be very misleading. For example, while the overall quantity fill for Class V was 78%, an analysis of 35 DODACs showed that the fill for small arms was 85% by quantity and 73% by tons shipped; however, the fill for larger caliber ammunition was 17% by quantity and 7% by tons shipped.

Table 2-2. Army EXCAP
Fill For All Classes of Supply By OPLAN

OPLAN	By Quantity	By \$ Value*
PLAN M	22%	26%
PLAN A	85%	27%
PLAN B	44%	5%
PLAN C	84%	70%
PLAN D	54%	20%
PLAN E	85%	59%
PLAN F	79%	46%
TOTAL*	48%	6%

*Total requirements for 30 days for all OPLANs was \$58 billion.

**Table 2-3. Army EXCAP
Fill By OPLAN By Selected Classes of Supply***

<u>OPLAN</u>	<u>II</u>	<u>V</u>	<u>VII</u>	<u>IX</u>
M	16/12	No reqts	100/100	25/58
A	17/19	95/47	6/1	25/48
B	13/13	66/10	20/1	30/34
C	0/58	94/88	No reqts	21/72
D	9/10	74/23	17/5	8/20
E	1/6	97/80	3/0	30/39
F	24/22	89/54	38/8	51/60
TOTAL	13/12	78/12	20/1	23/32

*% Fill by Quantity/\$Value

2.2 FUTURE SYSTEMS/CAPABILITIES

In the future (FY 88-91), the focus of management will continue to shift from item or NSN to major items and weapon systems. Stockage and resupply decisions will be based on weapon systems operational availability factors. Stockage models at the national level will compute organizational, direct support, intermediate, and wholesale stockage levels and provide these levels to the various logistics systems. Goals for future Army systems include:

- Providing the capability for major items/systems analysis in order to identify components, associated support items of equipment (ASIOE), and availability of common table of organization and equipment (TOE) items.
- Providing HQDA, HQ AMC, and its MSCs the capability for enhanced automated preparation, analysis, and defense of budgetary requirements in the procurement of major items.
- Providing maximum flexibility in "what if" capabilities.

- Establishing interactive and central data bases to capture demand, asset visibility, catalog, and requisition status information.

2.2.1 AMC's Proposed Emergency Logistics Management System (ELMS)

2.2.1.1 General

Various JCS exercises have indicated a crucial need for a method of allocating supplies during a crisis. Today, the Army has no wholesale mechanized system in place to allocate supplies among high priority claimants during mobilization. As noted earlier, this is a particularly difficult problem for secondary items and repair parts.

Since each item manager is responsible for the wholesale supply of hundreds of items, the capability for personal intervention is practical only in exceptional circumstances. During a mobilization or crisis, effective manual intervention would be impossible. Even if it were possible, currently there is no systematic way for item managers to distinguish among high priority requisitioning activities Army-wide.

The need for a wartime allocation system is accentuated by the fact that each Army ICP and SICC has the capability to initiate requisitions for individual items (managed by that ICP or SICC) required to support specific OPLANs. With the implementation of the first major OPLAN, these requisitions could enter the supply system well before other Service requisitions are initiated. The risk lies in early depletion of stocks, possibly to the wrong claimant.

AMC has developed a concept for the automated allocation and prioritization of the release of assets managed and maintained by the Army wholesale supply system to multiple claimants during contingency and wartime operations. The AMC Emergency Logistics Management System (ELMS) would use established JCS/DA asset apportionment guidance as a basis for development of wartime allocation procedures. Currently percentages for each claimant have been derived based on the predetermined requirements for support of CONUS mobilization and each of the designated global scenario OPLANs. The following formula illustrates the method:

$$\text{Allocation Percentage} = \frac{\text{individual claimant's requirements}}{\text{total requirement for all claimants}}$$

The Army asset claimants are stratified, for test purposes only, by the following geographic areas:

1. Northern Europe
2. Central Europe
3. Southern Europe
4. Allied and Friendly Countries
5. Africa South of the Sahara
6. Atlantic Command Area
7. Pacific Command Area
8. Central Command Area
9. Southern Command Area
10. CONUS Training Base (TRADOC)
11. CONUS Mobilization Stations (FORSCOM)
12. CONUS Sustaining Base

All classes and subclasses of supply for which AMC is the responsible inventory manager would be subject to allocation and prioritization procedures. The ELMS would be online at all times but transparent to the normal peacetime processing system. Also important to ELMS is the capability to rapidly adjust allocation percentages as scenario/guidance changes occur.

2.2.1.2 How the System Would Work

For a hypothetical scenario, Table 2-4 shows a sample allocation for the 12 geographic claimants. Three of the claimants, Africa South of the Sahara, Central Command, and the CONUS Sustaining base, received no initial allocation of supplies. Army requests by these claimants would automatically be placed on backorder.

Table 2-5 shows how supplies would be released under the current system compared to release with the ELMS.

Columns 1 and 2 show time-phased requirements by geographical command. Total requirements are 140 items, when only 100 items are in the bin. Column 3 shows how issue would take place under the current system. Essentially the early claimant requisitions would receive the supplies. Claimants after 13 September would not be satisfied, and their requirements would be placed on backorder. Column 4 reflects the allocation percentages contained in Table 2-4. Column 5

Table 2-4. Allocation

Army Asset Claimants by Geographic Area

	Geographic Area	Sample Allocation
1.	Northern Europe	10%
2.	Central Europe	50%
3.	Southern Europe	5%
4.	Security Assistance	5%
5.	Africa South of the Sahara	0%
6.	Atlantic Command Area	5%
7.	Pacific Command Area	10%
8.	Central Command Area	0%
9.	Southern Command Area	5%
10.	CONUS Training Base	5%
11.	CONUS Mobilization Stations	5%
12.	CONUS Sustaining Base	0%

shows issues and back orders under ELMs allocation criteria. The result of ELMS is markedly different from the current system.

- On 6 September, instead of receiving 10 as requisitioned, Mobilization Stations received only 5 and 5 were placed on backorder.
- On 7 September, Atlantic Command and European Command requisitions were all within the allocation percentages and were filled. Central European Command was allocated 50% and at this time only requisitioned 25%. In effect, this Command has another 25% coming and these will be reserved for the Command until they are requisitioned or the allocation is changed. The same applies to Northern Europe; they had an allocation of 10%, requisitioned 5% this date, and still have 5% in reserve for later use.
- On 9 September, the Pacific Command received only 10 of the 25 units requisitioned, and the remaining 15 were placed on back order. The Central

Table 2-5. Current Procedures vs AMC's Emergency Logistics Allocation System (ELMS)
Example: 100 units of Item XYZ

(1) TIMELINE	(2) REQUIRE- MENT	(3) CURRENT PROCEDURES FILL/BO*	(4) SAMPLE ALLOCATION PERCENTAGE	(5) AMC ELMS FILL/BO
<u>6 Sep</u> Mobilization Stations	10	10/-	5%	5/5
<u>7 Sep</u> Atlantic Command Central Europe Northern Europe Southern Europe	5 25 5 5	5/- 25/- 5/- 5/-	5% 50% 10% 5%	5/- 25/- 5/- 5/-
<u>9 Sep</u> Pacific Command Central Command	25 5	25/- 5/-	10% 0%	10/15 0/5
<u>13 Sep</u> CONUS Sustaining Base TRADOC	10 10	10/- 10/-	0% 5%	0/10 5/5
<u>15 Sep</u> Southern Command Southern Europe	5 5	0/5 0/5	5% --	5/- 0/5
<u>16 Sep</u> Pacific Command Northern Europe Central Europe	5 5 20	0/5 0/5 0/20	-- -- --	0/5 5/- 20/-
During this period Security Assistance had no requirements	0	0/0	5%	0/-
TOTALS	140	100/40	100%	90**/50

*Backorder

**5 being held for Central Europe and Security Assistance

Command had no allocation, and its requirement for 5 was placed on backorder.

- On 13 September, the CONUS Sustaining Base had no allocation, and its request for 10 placed on backorder. TRADOC received only 5 of the 10 requisitioned, and the remaining 5 placed on backorder.

- On 15 September, the Southern Europe requisition for 5 was placed on back order -- it had used its allocation of 5% on 7 September.
- On 16 September, the Pacific Command's request was denied--it had used its allocation percentage on 7 September. However, Northern Europe's request for 5 was filled since it had not exceeded its allocation of 10. In addition, Central Europe's request for 20 was filled since it had not exceeded its allocation of 50%. In fact, Central Europe still has another 5% reserved for use at a later date.
- Although Security Assistance had no requirements during this period, 5% had been allocated, and this 5% is being held for use at a future date.

In the above example, 100% of what was available was allocated to the geographical claimants. This may not always be the best course of action. If the situation is ambiguous, it may be desirable to allocate to the geographical claimants only a percentage of what is available, holding a reserve for later allocation as the situation develops.

2.2.1.3 Testing the ELMS

AMC tested the ELMS procedures during an exercise. This initial test was limited to Classes II and IX, and only for those items managed by AMCCOM. The results of this test for a sample item (disk valve for gas mask) are shown in Table 2-6. Without allocation the bins were emptied and 92,940 disk valves were placed on backorder to support a second cycle of requisitions from plans B and D.* With allocation, a total of 215,669 valves were issued, 180,261 placed on backorder, and 87,771 remain in the bins. The stock in the bins is reserved to fill allocations in support of OPLANs D, E, and F. At this time, a reallocation could be made to provide items to support the other OPLANs.

*The time-phased fill cycle was as follows: OPLAN M, A, B, C, D, E, F, B, and D.

**Table 2-7. Allocation Test
(Disk Valve - Gas Masks)**

On-Hand Beginning 303,440				On-Hand Beginning 303,440			
Without Allocation				With Allocation			
PLAN	REQT	FILL	B/O	REQT	FILL	B/O	REMAINING ALLOCATION
M	26,584	26,584	0	0	26,584	0	26,584
A	726	726	0	0	726	0	0
B	299,732	241,456	58,276	50	299,732	151,720	0
C	4,939	4,939	0	0	4,939	0	0
D	58,458	24,244	34,214	40	58,458	58,458	0
E	3,962	3,962	0	5	3,962	3,962	0
F	1,529	1,529	0	5	1,529	1,529	0
Total	395,930	303,440	92,490	100%	395,930	215,669	180,261
On-Hand Ending: 0				On-Hand Ending 87,771			

2.2.1.4 Summary

It is envisioned that the JCS will establish percentage allocations for all wholesale asset claimants, by priority, prior to or early in a crisis. These percentages would be applied to current wholesale assets and would reserve those stocks until requisitioned by that claimant. Establishment of new percentages could be made at any time and would cause the process to repeat itself.

2.3 RELATED ISSUES

2.3.1 Need for Timely Guidance

There is a general concern at HQ AMC and the ICPs that current JCS procedures to provide logistics guidance are ineffective and do not provide for timely allocation decisions in a crisis. AMC noted that for the test of the ELMS, OJCS-J4 (JMPAB Secretariat) was asked to establish allocation percentages for the 12 geographic claimants. When the percentages were not provided, AMC assigned their own percentage factors in order to test the system. However, the AMC view is that this type of guidance--allocation among CINCs--should be provided by OJCS and not left to the discretion of HQ AMC, their MSCs, or the item managers. This inability to provide guidance in peacetime further supports the belief that allocation percentages must reside in the ADP system before a crisis begins. To introduce them afterwards may be too late. Current JMPAB procedures are time consuming for even one or two items, and decisions of this magnitude could not be made after-the-fact. This influences AMC's view of any allocation system that requires extensive top-down guidance. AMC believes ELMS could be implemented immediately and would be a management system that provides guidance, yet permits existing logistic systems to function.

2.3.2 Defense Materiel Allocation System (DMAS)

The AMC consensus is that DMAS is too complex for early implementation and too dependent on timely decisions by the joint logistics community. It was agreed that the DMAS, with considerable work, could be implemented and that it was a good long-range goal. General comments were:

- DMAS is not an allocation system, but a wartime prioritization system that overrides UMMIPS.
- Even if DMAS were implemented, it does not preclude the bins being emptied to the wrong claimants. It really depends on which variables OJCS specifies to be activated.
- A common system for all is probably not practicable at this time--there are just too many differences among Service and DLA supply systems.
- There was uncertainty as to how the Category I and Category II releases would be accomplished. Processing of Category I requisitions on a priority basis was understood. The confusion centered around Category II demands. The features surrounding this category of requisitions were felt to be far too complicated for wartime implementation after-the-fact.

These views were forwarded to OSD by DCSLOG in September 1987.

2.3.3 JCS Apportionment

Planners at HQ AMC and AMCCOM are currently working with the OJCS-J4 staff to strengthen the apportionment system. The AMC view is that apportionment is perhaps helpful for deliberate planning but, as currently implemented, has little effect on the the Army supply system. The primary interest is what happens when the war starts--what type of allocation system will be in place? AMC believes that the JSCP apportionment percentages should be the initial wartime allocation percentages. To be otherwise only complicates the relationship between apportionment and the architecture of new automated systems. From a policy point of view, the effect on the CINCs of "fencing stocks" is understood, but apportionment and allocation issues are better dealt with in peacetime than during crisis or war. At least apportionment would provide a going-in position that could be changed as circumstances of a specific crisis are known, and it would prevent an immediate drain on the wholesale system until higher authorities can redirect priorities. Thus, allocation percentages to support a range of scenarios would be resident in the ADP system in peacetime--although transparent to peacetime operations--ready for immediate implementation in a crisis. If allocation percentages are placed in the ADP system in peacetime, they should be the same as apportionment percentages. There is perceived to be a reluctance to tell the CINCs that peacetime apportionment

will also be initial wartime allocation. However, this is better dealt with in peacetime so CINCs can appeal allocation percentages or revise OPLANs to better conform to the actual flow of supplies.

Some of AMC's concerns and comments are:

- CINC and component planners have little visibility over what is available in the wholesale supply base. Therefore, a percentage allocation is of little value -- 10% of 100 or 10% of 10,000?
- While apportionment information is useful in sourcing essential or key items, there is no feedback loop to the CINCs concerning shortfalls in their planning requirements. Thus, each CINC continues to believe that his requirements will, for the most part, be satisfied.
- The current apportionment of supplies goes to overseas CINCs only. In a major crisis, the Army in particular has a large and early requirement to support mobilization of reserve forces and to expand the training base. This issue is currently being discussed with members of the J-4 staff.

HQ AMC personnel are working with J-4 planners to narrow the differences between JSCP apportionment and the ELMS. The AMC goal in requirements determination is to be able to tell an Army component by NSN:

<u>The Requirement</u>	<u>In-Theater</u>	<u>CONUS</u>	<u>% Allowed</u>	<u>Shortfall</u>
xxx	(you have)	(we have)	(you get)	x

2.3.4 Army CIL

AMC planners believe that as management's focus transitions from individual items to systems, the Army and perhaps even DoD should establish a single critical or essential items list. This list should be established around those systems and associated support equipment considered essential to war fighting. This single list would replace the plethora of current lists--Army CIL and supporting IPPL, CINC CILS, consolidated JCS CIL, etc.--all of which were developed independently, contain different items, and focus on relatively few items. There are efforts currently underway to develop extensive data bases to manage the few hundred items on these lists--which may, in fact, be the wrong items. Current CILs have been

developed with no rigorous analysis and in many respects are mere "wish lists". AMC planners believe that intensive management of these various lists containing only a few hundred items tends to mask the seriousness of the overall logistics posture.

AMC planners recommend that a single Army CIL be developed by the AMC Commodity Commands, identifying those essential items that support the warfighting systems. These items would be selected based on worldwide demand data, current shortages on PWRM and OWRM, operating shortages and backorders, attrition factors, wartime sustainment, and battle damage losses to the extent known. AMC estimates the list may contain between 200,000 to 250,000 items, understandably beyond the capability of a limited J-4 staff to supervise or oversee. However, the commodity commands are believed to have the staff, the expertise, and the continuity to manage this number of items. Such a list, once established, would provide useful information to the CINCs, provide better support to the PPBE's process, and, most importantly, be a more precise guide on what items to procure and in what quantity, to support the Army's overall warfighting capability. Currently, there is no apparent correlation between the various CILs and procurement policy and priorities.

SECTION 3
U.S. AIR FORCE
ACTIVITIES

3. GENERAL

The Air Force materiel supply system is essentially designed as a "pull" type system, reacting to demands submitted in the form of requisitions from using activities. While planning and programming actions affect the acquisition of materiel, there has been little attention given to pre-planning the distribution of supplies except for War Reserve Spares Kits (WRSK) and Pre-positioned War Reserve Materiel (PWRM). The focus of supply system improvements has generally been on forecasting and reacting to requirements rather than on managing "who gets what" as a function of the system.

The Air Force supply system will not presently support an allocation process to carry out JCS apportionment guidance. In fact, the qualifications now contained in the JSCP guidance, excluding applicability to Supply Classes II, VII, and IX for the Air Force, eliminate any external requirements for the Air Force to develop an allocation capability. Other classes of supply are centrally managed by another Service or agency and therefore are not of concern to the Air Force with respect to item management capability.

Resupply planning in the Air Force is not calculated to the National Stock Number (NSN) level of detail; consequently, automated materiel management systems have not been developed to perform that task. Of the three general classes of supply that the Air Force manages for itself (Classes II, VII, and IX), only selected items in those groups are intensively managed. Within Class V-Munitions, air munitions are also closely managed. The Air Force has generally taken the position that most Air Force assets in Class VII-Major End Items, are already assigned to operating units; thus, allocation would not apply. For Class IX-Repair Parts and Repairables, the Air Force philosophy has been that allocation is already carried out as much as possible in the War Reserve Spares Kits (WRSK) possessed by units scheduled for deployment in OPLANs.

Presently, the internal distribution of materiel assets within the Air Force is most directly controlled by the USAF Priority System for Resources Management, prescribed in Air Force Regulation 27-1. This priority system further refines the structure established under the UMMIPS. The Air Force system keys on

Force/Activity Designators (FADs) assigned under the UMMIPS and prescribes precedence ratings within each FAD group, as shown in Table 3-1.

Table 3-1. USAF Precedence Ratings

<u>FAD</u>	<u>USAF Precedence Rating</u>	
	<u>From</u>	<u>Through</u>
I	1-01	1-05
II	2-01	2-10
III	3-01	3-10
IV	4-01	4-10
V	5-01	5-10

These precedence ratings are assigned to Air Force units and programs based on mission essentiality, with each unit or program having the lowest precedence rating consistent with its essentiality to the Air Force mission. Precedence ratings are controlled by HQ USAF and are reviewed annually by a general officer-chaired working group of Air Staff and major command representatives. The Air Force Program Document (PD) lists the precedence ratings for all Air Force units and programs.

3.1 CURRENT SYSTEMS/CAPABILITIES

The Air Force supply system is managed by the Air Force Logistics Command (AFLC), with its headquarters at Wright-Patterson AFB, Ohio. AFLC operates five Air Logistics Centers (ALCs) in the CONUS. These ALCs control depot operations within their geographic areas and are worldwide managers for specific commodity classes and weapon systems assigned to each of them. The ALCs are Warner-Robins, Georgia; Oklahoma City, Oklahoma; Ogden, Utah; San Antonio, Texas; and Sacramento, California. The working level supply customer is served by the local base supply retail facility, controlled by the base or wing commander, under one of the major commands (MAJCOM).

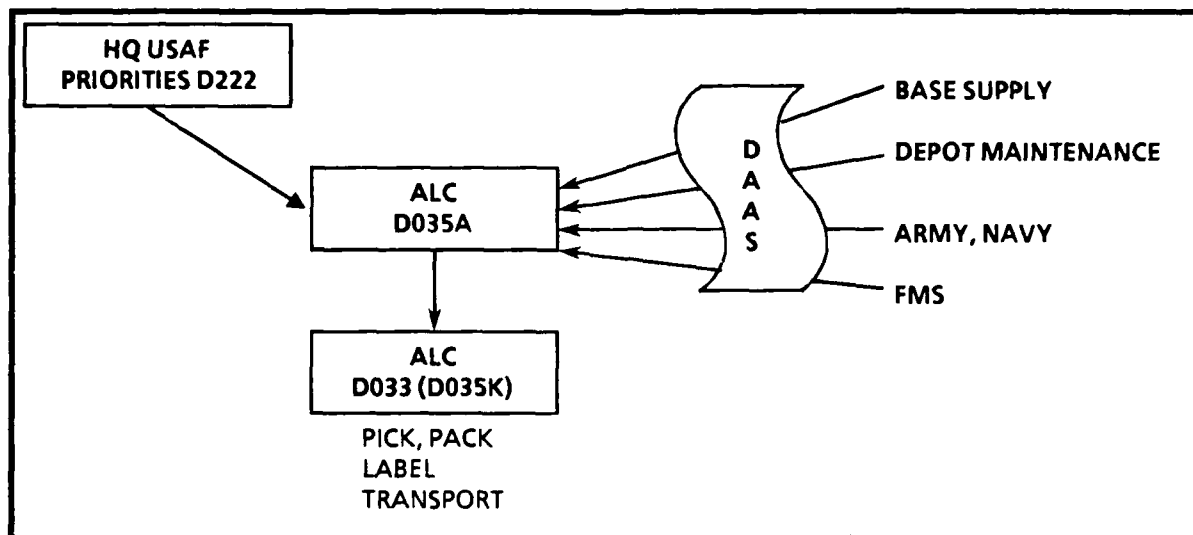
Air Force supply management embraces two primary concepts: supporting the recovery and repair of investment items, and controlling the stockage and issue of expendable Economic Order Quantity (EOQ) items. The repair cycle includes turn-in of unserviceable investment items and issue of serviceable replacements at base level, repair of unserviceable items in base or depot level maintenance, and restocking of repaired items as available assets. This concept applies to aircraft,

missile, motor vehicle, communications-electronics, and armament-electronics item and component maintenance. EOQ items are usually expendable, have a high turnover rate, and are procured in large quantities. The EOQ is defined by the Air Force as "that quantity to be ordered which keeps the combined cost to order and hold inventory at a minimum."

The Air Force logistics system is highly automated and operates on a variety of hardware configurations. Individual systems now number over 300, developed and operated by AFLC and the Major Commands (MAJCOMs). These systems support base-level retail and depot-level wholesale operations.

The Air Force retail (base level) activities depend on the Standard Base Supply System (SBSS) and the Base Level Transportation System for major support of supply operations. Wholesale (depot level) activities utilize the Inventory Manager's Stock Control and Distribution System, the Recoverable Consumption Item Requirements System, and the EOQ Items System. The Logistics Support Priority System (LSPS), D222, is the means through which HQ USAF (AF/LEX) keeps the Air Force logistics community and the automated supply systems advised of current priorities for organizations and programs. These priorities are established using the AFR 27-1 system mentioned earlier. There is presently no automated link between System D222 and the other supply systems; changes in priorities must be passed to the ALCs via message, then manually entered into the automated process at that point. Figure 3-1 demonstrates how requisitions flow from users, through the DAAS, to the ALCs, and are processed. Priorities guidance from HQ USAF is also shown as an input to the process.

Automated logistics systems in the Air Force have proliferated as specific needs arose, with little attention given to compatibility or interoperability with existing systems. These systems are batch operated and most have been in existence for ten to twenty years. The complexity, pace, and demands of managing Air Force logistics have outstripped the capabilities of existing systems, including both software and hardware.



284-0010

Figure 3-1. USAF Supply Process.

3.2 FUTURE SYSTEMS/CAPABILITIES

3.2.1 Logistics Systems Modernization

There is now an ongoing program to modernize Air Force logistics systems under the umbrella of a master integration architecture. Base-level modernization includes hardware replacement, enhancement of the Standard Base Supply System (SBSS), and integration into the Defense Data Network (DDN). These improvements are planned for completion in 1989.

Depot-level modernization will focus on replacing the more than one hundred batch systems with thirteen major on-line systems. AFLC has this effort well underway. The major systems in the depot-level modernization are the Stock Control and Distribution (SC&D) System and the Requirements Data Bank (RDB).

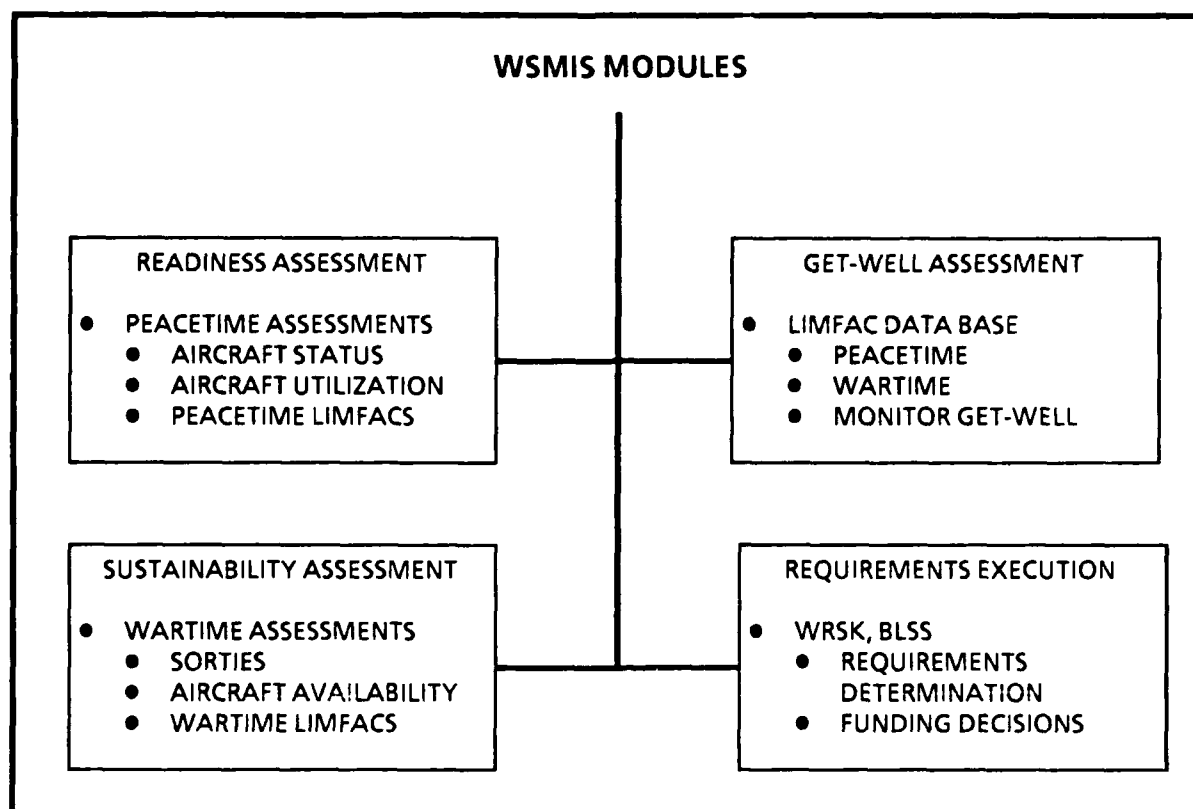
As its name implies, RDB is a requirements oriented system and will not provide the capability to implement JCS apportionment guidance. However, the Aircraft Availability Model (AAM) function within RDB will identify and allow intensive management of items most critical to aircraft availability. Also, there are improvements being made to the Air Force's SC&D system that will essentially establish a "push" capability for the 10% of Air Force supply items that are intensively managed because of high cost or limited availability. If these efforts

prove successful, it may be possible to extend this item management technology to a separate automated system that would provide the ability to manage a larger share of Air Force materiel assets down to NSN level. Admittedly, this would require developmental work and could not be achieved rapidly.

3.2.2 WSMIS

The Weapon System Management Information System (WSMIS) already exists; however, new modules and capabilities are being added which may make WSMIS one of the most powerful logistics management systems in the Air Force. For air warfare, Air Force logisticians believe the WSMIS can significantly improve and augment the ability to predict what items will be essential to sustaining air combat capability. The WSMIS design includes four primary modules: Readiness Assessment Module (RAM), Get-Well Assessment Module (GWAM), Sustainability Assessment Module (SAM), and Requirements Execution Availability Logistics Module (REALM). The modules and their internal capabilities are shown in Figure 3-2.

These modules are designed to jointly provide the capability to assess the air power requirements of an OPLAN in terms of necessary logistic support. The WSMIS assessment can be done on a unit or theater level. The WSMIS SAM module identifies shortfalls in air capability, reduces the shortfalls to limiting resource groups, then specifies limiting line items. SAM provides logisticians throughout the Air Force the ability to more accurately identify assets needed to sustain an armed conflict. This ability provides the MAJCOMs information to better develop their War Readiness Spares Kits/Base Level Spare Sufficient (WRSK/BLSS). This model, using historical breakage rates applied to a war time sortie rate, identifies assets that should be in the kits. Figure 3-3 provides a graphic description of how WSMIS generates a theater level assessment. The areas of the figure enclosed within dotted lines are capabilities being further developed and implemented during the 1988 and 1989 time period. One aspect of WSMIS that requires more examination is the lack of battle damage information as an input to requirements generation. While there may not be specific empirical data to draw upon, it may be possible to provide battle damage consideration through modelling.

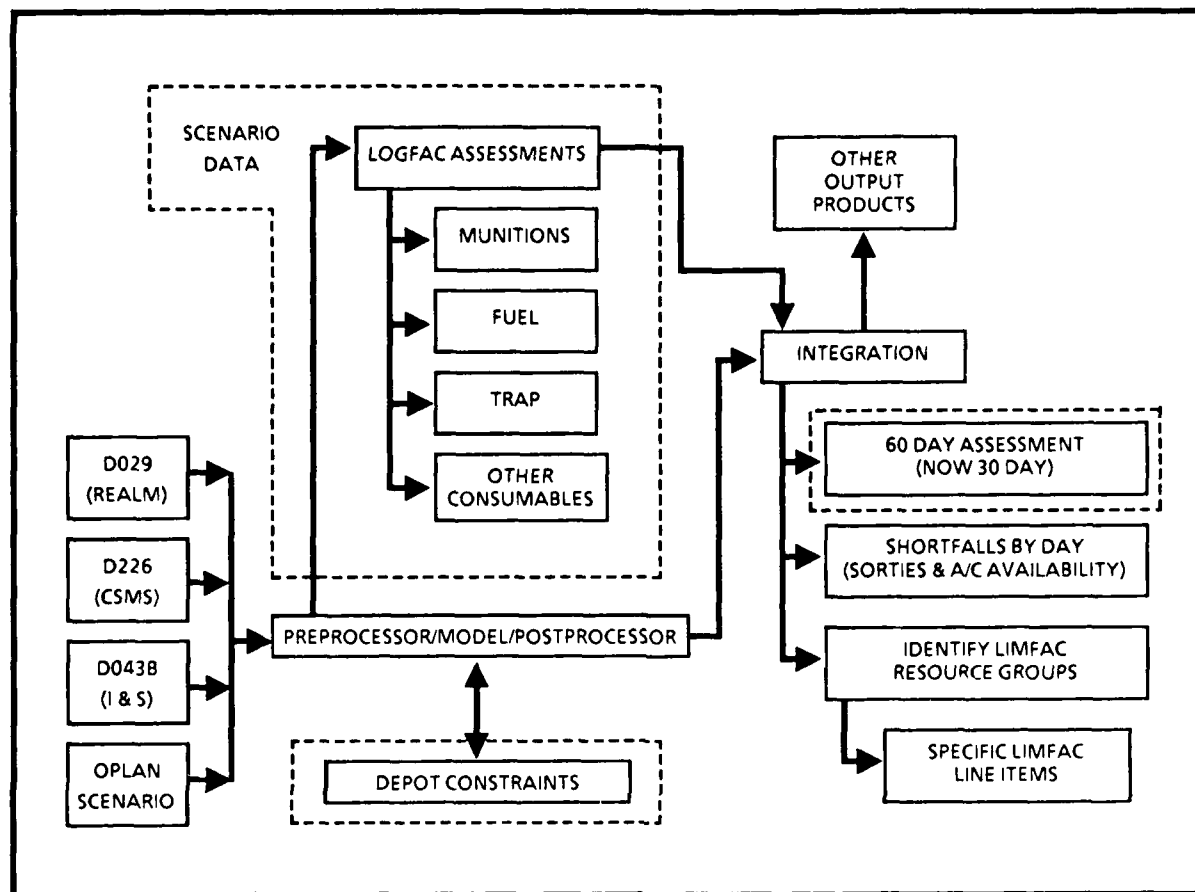


284-0015

Figure 3-2. WSMIS Modules.

3.2.3 ETADS

Another system under development in AFLC that would support allocation of critical assets when directed by the JCS is the Enhanced Transportation Automated Data System (ETADS). AFLC's ETADS will provide requirements, schedules, and movement of non-unit related cargo. It is to be the interface with the Joint Deployment System and will subsequently provide interface with MTMC on surface movements. This system gives visibility of supply and equipment assets in the transportation system through a recognition of project codes in a specific field of a supply requisition. The capability inherent in ETADS would facilitate redirecting assets should that be required to support allocation.



284-0017

Figure 3-3. WSMIS Sustainability Assessment

3.3 RELATED ISSUES

3.3.1 WSMIS and Critical Items

Closely related to the issue of apportionment and allocation is the subject of critical items. Critical Items Lists (CILs) are submitted by the CINCs annually. These lists are intended to identify the items of supply or equipment most critical to each CINC's ability to successfully accomplish his assigned wartime mission. There is considerable controversy as to whether the items on these lists will in fact be the most needed items should war occur. For air warfare, Air Force logisticians believe their recently revised Air Force Critical Item Program using the Weapon System Management Information System (WSMIS) as the data base can significantly

improve and augment the ability to predict what items will be essential to sustaining air combat capability.

3.3.2 DRIVE SYSTEM

Developed jointly by RAND and AFLC, Distribution and Repair In Variable Environments (DRIVE) is a resource allocation model that uses Dyna-METRIC-like techniques to prioritize distribution and repair actions for recoverable items based on current asset status and near-term aircraft availability goals at worldwide operating locations.

With DRIVE, item managers can allocate available resources to the highest priority needs of operational units and effectively respond to changing circumstances including increased or decreased flying activities, revised theater priorities, aircraft deployments, funding constraints, and other factors that affect peacetime and combat support operations.

AFLC plans to develop DRIVE as a WSMIS module and to integrate this capability into the Requirements Data Bank (RDB) for command-wide use. Automated interfaces between DRIVE and the Stock Control and Distribution (SC&D) system will initially be established to support item management allocation within PD categories.

Future enhancements to DRIVE are expected to provide a capability to rapidly reprioritize and reallocate critical resources among competing units and weapon systems that affect major force programs (e.g., air defense vs tactical fighters); inter-theater forces controlled at the JCS level; intra-theater operations at the combatant CINC level; and within and between weapon systems at the Component Commander level. The objective of DRIVE is an optimum distribution of critical items at operational units, forward stockage points, and worldwide support activities to best meet approved aircraft availability goals in peace and war.

3.3.3 MICAP Allocation System

The MICAP (Mission CAPability) Allocation System was designed by AFLC in an effort to cope with the large number of high priority requisitions competing for the same assets. The automated MICAP system was designed to apply existing Air Force precedence ratings in conjunction with JCS project codes and UMMIPS

standards in the allocation of scarce assets among competing priority claimants. The system would go into effect when a National Stock Number (NSN) item projected a stock-out position, based on a 6-month projection for EOQ items and a 3-month projection for investment items. When items went to rationed status under MICAP, upper and lower asset preservation levels were automatically computed. Requisitions were then processed or deferred (backordered) under a set of rules applying LSPS priorities, JCS Project Codes, and UMMIPS standards.

A recent Air Force study showed that MICAP could cause backorders and priority requisitions to increase rather than decrease. Consequently, MICAP does not achieve the objectives for which it was originally designed. However, work done on MICAP has been useful in examining ways to ration materiel during periods of high demand. If the MICAP approach were pursued for allocation, much work would be required to develop a real allocation tool for the Air Force.

3.3.4 Theater Distribution Systems

One Air Force program that amounts to a "partial push" system and is a departure from the previous CONUS-based wholesale stockage system is the centralized theater asset storage and distribution approach, incorporating the European Distribution System (EDS) and the Pacific Distribution System (PDS). Under this approach, the WSMIS is used to identify potential stockage items to Air Force commands within the theater. Once reviewed and items selected, assets are moved from CONUS to the forward stockage points. In the case of armed conflict, the theater CINC would assume control of these assets and distribute where necessary. This allows the Air Force to determine "push" distribution to the forward stockage site. This, in conjunction with the WSMIS, provides AFLC the capability to "push" assets to a theater and still maintain accountability at the centralized forward stockage sites where in-theater units can draw resupply items.

3.3.5 Exercises

AFLC representatives are concerned about logistics play in joint exercises. Experience indicates that critical items written into exercises are from three to five years old, and may not be the real critical items should a crisis occur. Further, attempts by AFLC to inject more realistic scenario events into joint exercise planning so as to severely test logistics capability have not been very successful.

AFLC logistics planners believe the WSMIS can be of invaluable assistance in improving the validity of critical item requirements as input to exercise planning.

3.3.6 Role of the JMPAB

There is also concern at AFLC regarding the role of the JMPAB as it has operated in the past. An example of the reason for this concern specifically related to apportionment/allocation was a request of the JMPAB to test apportionment by including a CINC-to-CINC reallocation as an exercise item. The item was not included in the exercise, although it could have provided valuable insight into the practical problems of implementing JSCP guidance.

3.3.7 FAD Levels

AFLC logistics planners are also concerned about escalation in FAD assignments. There is a belief that help from the OJCS level is required to combat this rise in FAD levels.

SECTION 4
U.S. NAVY ACTIVITIES

4. GENERAL

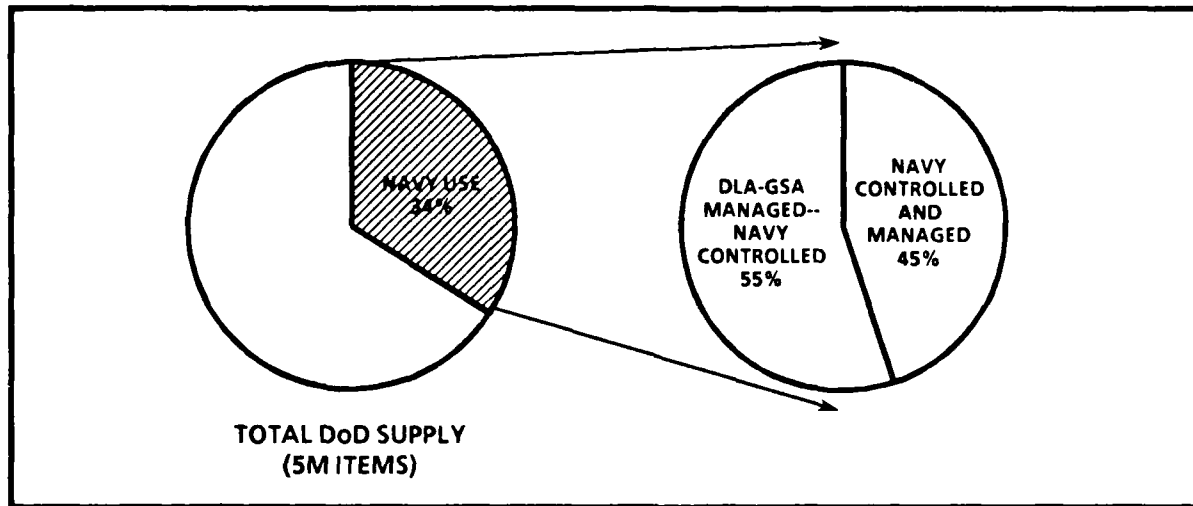
The unique characteristics of the Navy Warfare system, which includes ships, submarines, aircraft, and missiles, and Navy mission orientation, their readiness, mobility, and endurance, prescribe the variety of support which the Navy supply support system provides. Prior to 1963, the support system was organized such that the users of materiel and services constituted one part and the producers, buyers, or manufacturers of materiel to satisfy user requirements were the second part. In 1966 the Navy supply system was reorganized and the two parts combined to create the Naval Material Command. Within the Naval Material Command are five principal subordinate commands or system commands (SYSCOMs). The SYSCOMs, established to facilitate systems support to the Navy Fleet, include:

- Naval Air Systems Command (NAVAIR)
- Naval Space and Warfare Systems Command (SPAWAR)
- Naval Facilities Engineering Command (NAVFAC)
- Naval Sea Systems Command (NAVSEA)
- Naval Supply Systems Command (NAVSUP)

Of the five SYSCOMs, NAVSUP and NAVAIR can be considered as the keys to any apportionment or allocation system since they control the majority of Navy supply activities which could affect, or be affected by, inter-Service supply availability and/or demands. The Navy uses approximately 1.7 million line items of the 5 million line items in the DoD supply system. Fifty-five percent, nearly 1 million line items, are managed by DLA or GSA. NAVSUP controls much of the Navy requirement for DLA/GSA items as intermediate retail stock stored at Naval Supply Centers. The other forty-five percent (see Figure 4-1), approximately 770,000 line items, are managed by NAVSUP's two ICPs, the Aviation Supply Office and the Ships Parts Control Center.

4.1 FLEET SUPPLY SUPPORT

The Navy fleet is virtually always mobilized and therefore the Navy approach to sustainment is markedly different from Army and Air Force logistics system methodologies. Navy fleet supply support consists of an organic level of supply and two echelons of resupply: the Combat Logistics Force (CLF) and overseas bases; and the supply centers in CONUS. The supply support configuration follows.



284-0030

Figure 4-1. Relationship of DoD Supply System and Navy Item Use and Management

- The organic level consists of the materiel carried aboard ships, or aircraft, as specified in either a Coordinated Shipboard Allowance List or an Aviation Consolidated Allowance List. Each allowance list is developed to correspond to the individual ship/aircraft and is based on the craft's equipment/ordnance systems, as well as operational requirements (e.g., fleet, mission, deployment area, size of the crew). The range and quantity of demand-based allowances are computed generally to provide support for an average endurance period of 90 days.
- The Combat Logistics Force (CLF) (tenders, repair and replenishment ships), augmented by overseas depots, provides the first echelon of Navy combat resupply support. The logistics support ships carry the consumable supplies and frequently requested repair parts needed to support the combat forces. Similar to the Allowance Lists described above, the materiel carried by the logistics support ships is tailored to meet the sustainment needs for the individual types of ships and the mission(s) of the Naval combat/task forces they support. This combination of deployed resupply assets is designed to satisfy Navy policy that deployed fleets are to be self-sustaining for 3 to 6 months of wartime operation without resupply from CONUS.

- The second echelon for Navy resupply consists of the Navy CONUS Supply Centers which stock DLA, GSA, and Navy managed materiel. These supply centers support the operating forces, including the Combat Logistics Force, and Navy shore activities such as Naval Air Stations, weapons stations, shipyards, and training centers. The supply centers determine range and depth of DLA/GSA material held as intermediate retail stock for issue to customers. NAVSUP determines the mission of each supply center based on other SYSCOMs and Fleet user needs. Naval Supply Centers also provide support to the Marine Corps, Coast Guard, and other Services, and friendly foreign countries under the Military Assistance Program.
- The responsibility for providing supplies to meet user needs for most Navy supply items rests with the Inventory Control Points (ICPs). The Navy ICPs determine the range and depth of Navy-managed wholesale materiel positioned at the supply centers and other Navy stock points. The supply centers are authorized to issue Navy-managed items. Although the ICPs can restrict items to centralized issue, this generally requires the ICPs to manually allocate assets.

4.2 RETAIL LEVEL SUPPLY

The Navy Retail Office at the Fleet Material Support Office exercises financial control and retail management of materiel managed at the wholesale level by DLA, GSA, and other Services. Retail stock levels are monitored by using financial inventory control data and field service visits rather than through an item reporting system. For DLA, GSA, and other Service managed items, the Navy computes requirements for prepositioned war reserve stocks, physical stockage; issues DLA stocks on a reimbursable basis, and manages such stocks within the Navy distribution system both ashore and afloat.

4.3 CURRENT SYSTEMS/CAPABILITIES

In general, Navy logistics systems parallel the Systems Command organization in that little or no connectivity exists between them. There is virtually no current automated means to consolidate the data contained in the separate management information systems. Further complicating the availability and reliability of Navy logistics information are the logistics requirement generation systems, which also do

not have any automated interface. Of the current Navy logistics systems, the most important for the purposes of this analysis are as follows.

- Uniform Automated Data Processing Program System for Inventory Control Points (UICP). The UICP is a centrally designed and maintained computer system established to automate logistics functions at NAVSUP managed ICPS. UICP objectives are:
 - To ensure uniform interpretation and implementation of supply management policies, procedures, and controls;
 - To provide more effective, timely response to changes in supply management policies and procedures;
 - To minimize ADP system development and maintenance costs through centralized system design and programming; and,
 - To ensure effective system interfaces with all other Navy and DoD supply echelons.

UICP utilizes over 60 files which have been recently integrated into a data base management system.

- Uniform Automated Data Processing System for Stock Points (UADPS-SP). UADPS-SP, developed and installed in the early 1960s, provides automated requisition and receipt processing, and the movement, fiscal, and inventory controls needed to manage the Navy supply system. As with CAIMS, UADPS-SP is not in the WWMCCS. Communication is achieved off-line through the use of standard procedures, such as the Military Standard Requisitioning and Issue Procedures, the Military Standard Transaction Reporting and Accounting Procedures, and others.
- Casualty Reporting (CASREP) System. The system used in the Navy for rapid response to emergency supply requirements from the operating fleets is CASREP. The system is conducted through message traffic and initiates a practiced and effective series of off-line actions within the supply community to locate and provide materiel needed by a disabled ship. While CASREP has been effective in responding to individual situations, it is a manual

intervention process. CASREP is not designed to meet large scale, sustained emergency requirements nor can it perform allocation.

- **Conventional Ammunition Inventory Management Systems (CAIMS).** CAIMS is a distributed ammunition information system which maintains daily accountability of all munitions in the Navy inventory as well as production status (e.g., due-ins) of munitions for which Navy is DoD manager, (e.g., AIM-9, Mk-80 series). CAIMS is operated by the Ships Parts Control Center, Mechanicsburg, PA, and can aggregate or display munitions assets data by Fleet, theater, or depot as either all-up rounds or as rounds by component to identify any component shortfall. CAIMS also indicates, and updates annually, approved munitions allowances and Prepositioned War Reserve Materiel Requirements. Although not in WWMCCS, CAIMS receives daily transaction and transportation data from the Fleet, Naval Weapons Stations, and from the Single Manager for Conventional Ammunition via Army Materiel Command's Commodity Command Standard System. The CAIMS data base, which currently does not contain all the DoD standard ammunition data elements (i.e., NSN, DODAC, DODIC), is being updated to an all-NSN capability.

4.3.1 Requirements Generation

The reliability of Navy assessments of logistic sustainment requirements varies. In some situations, low reliability results from a lack of the historical demand data needed to derive accurate planning factors. An example is the set of factors used to project wartime requirements to repair battle damage to ships, aircraft, and related systems. The "battle damage" that has been incurred since World War II is too small a sample to be reliable. Of greater significance is the lack of automated data transfer capability and systems accessibility, as most systems used for Navy requirements generation are essentially stand-alone. An example is the Non-Nuclear Ordnance Requirements System (NNORS), a contractor developed and operated series of munitions wargaming models. NNOR is used to compute munitions requirements for specific scenarios. In addition to accessibility problems, NNOR also does not provide the capability to determine requirements for crisis scenarios.

4.4 FUTURE SYSTEMS/CAPABILITIES

The UICP, UADPS-SP, and CAIMS are all undergoing major systems upgrade to take advantage of the speed and flexibility of state-of-the-art mainframes, DBMSs, LANs, and inter-processing sub-system networks. These enhancements will accommodate larger processing requirements and Service-wide on-line access to inventory and shipping data across stock points and ICPs. One such modernization effort is the Stock Point Logistics Integrated Communications Environment (SPLICE), which envisions 62 sites equipped with TANDEM Corporation TXP mainframes interfaced via DDN to establish a Navy-wide "SPLICENET".

The Navy logistic modernization efforts have only recently recognized the requirement to integrate data derived from the individual logistics system architectures. In June 1987, OP-04 determined that the existing and the modernized logistic system architectures would not provide the CNO or the JCS and their respective staffs the logistics information necessary to execute any given OPLAN. Accordingly, program efforts were begun to develop the funding and functional requirements for the Navy's Logistic Planning and Execution System (LPES). Conceptually, LPES uses a gateway methodology to gain rapid access to the information resident within the individual SYSCOM architectures. This would be accomplished by using the Washington Navy Yard mainframe, linked to the CNO's logistics staff in the Pentagon via WIS, as an interface to the SYSCOM data bases.

Navy logistic systems need to be networked in order to provide the Navy logistics staff sufficient information for plan execution as well as for deliberate planning. The LPES should include materiel requirements generation systems that are responsive to peacetime planning and crisis or war.

4.5 RELATED ISSUES

4.5.1 JCS GUIDANCE

The Navy, with its existing methodologies and system capabilities, cannot implement apportionment guidance and effect allocations of Navy-managed assets. With the exception of conventional ammunition, other Navy-managed items would be allocated at the ICPs on a predominantly manual basis. Given a requisition increase of three to four times the peacetime rate, it is doubtful that the ICPs could perform allocation for all the non-ammunition items that require it. This is also true

for DLA/GSA items controlled by the Navy stock points. In this regard, it is important that the OJCS/J-4 support and assist the Navy in their modernization effort.

4.5.2 MODELS

The MODernization of DEfense Logistics Systems (MODELS) effort, as currently envisioned, will probably not affect the estimated accuracy for allocation actions within current Navy systems. Even though MODELS will provide for variable format requisition entries, provisions should be made for additional information on requisitions using the current 80 column card format; information that would allow the Item Managers to make better decisions. One Navy suggestion that deserves review is to establish Service-related codes for the current Service Code single-position field. The Navy recommended that each Service be assigned four or five single characters for use during wartime/mobilization conditions which could be used to identify the Theater/CINC or to designate units in combat, units in theater, units deploying within 15 days, or units deploying later.

SECTION 5
U. S. MARINE CORPS ACTIVITIES

5. GENERAL

The United States Marine Corps is an integral part of the Department of the Navy, with its primary missions ranging from supporting the Navy land bases and/or providing detachments for service on Navy vessels to developing the tactics, techniques, and equipment for landing forces in amphibious operations. The Marine Corps has been authorized to develop a separate and distinct supply system from the Navy.

The goals of the Marine Corps supply system are:

- Effective operation in both peacetime and in crisis or war, with rapid transition from peace to war.
- Responsiveness to the needs of the operating and supporting forces regardless of location.

The Marine Corps supply system consists of three managerial levels: Marine Corps Headquarters, the in-stores, and the out-of-stores functional elements. The headquarters is responsible for concepts, policies, and guidance; the in-stores element performs actual distribution; and the out-of-stores element represents the ultimate user.

5.1 CURRENT SYSTEMS/CAPABILITIES

5.1.1 In-stores Element

The in-stores element is managed under a single integrated system, the Marine Corps Unified Materiel Management System (MUMMS). The organizational structure for the system consists of Headquarters, Marine Corps, one inventory control point (ICP) which is part of the Marine Corps Logistics Base (MCLB) at Albany, GA, and two remote storage activities (RSA). One RSA, at Albany, GA, supports the Fleet Marine Forces in the Eastern United States and the Atlantic theater. The second RSA at Barstow, CA, provides support for Fleet Marine Forces in the Western United States and the Pacific.

Under the Marine Corps Unified Materiel Management System, the ICP controls all the operations in the acquisition, availability, and disposal of materiel assets. The ICP handles nearly 750,000 line items of which only 5,000 (consumables)

are Marine managed items; 250,000 line items are Army managed; 350,000 are DLA managed; and the remainder are Navy/Air Force managed items (See Figure 5-1). (This management breakdown does not include Class V, which is Army managed, nor aviation resupply, including spares, munitions, electronics, etc., which is Navy managed.) Of the total ICP management tasks, approximately 40,000 line items are identified as war reserve material (WRM) of which over one-half are managed by other Services/agencies. The ICP functions include requirements determination, procurement, receipt control, stock and issue control, inventory analysis, budgeting, financial store accounting, performance measurement, and determination of excesses. The ICP is also responsible for technical direction over the RSAs. Under the in-stores element, the RSAs are tasked to:

- Receive, maintain, and issue in-store stocks and equipment to Marine units located in their area of responsibility.
- Manage a decentralized, local direct support stock control system.
- Operate customer issue outlets.

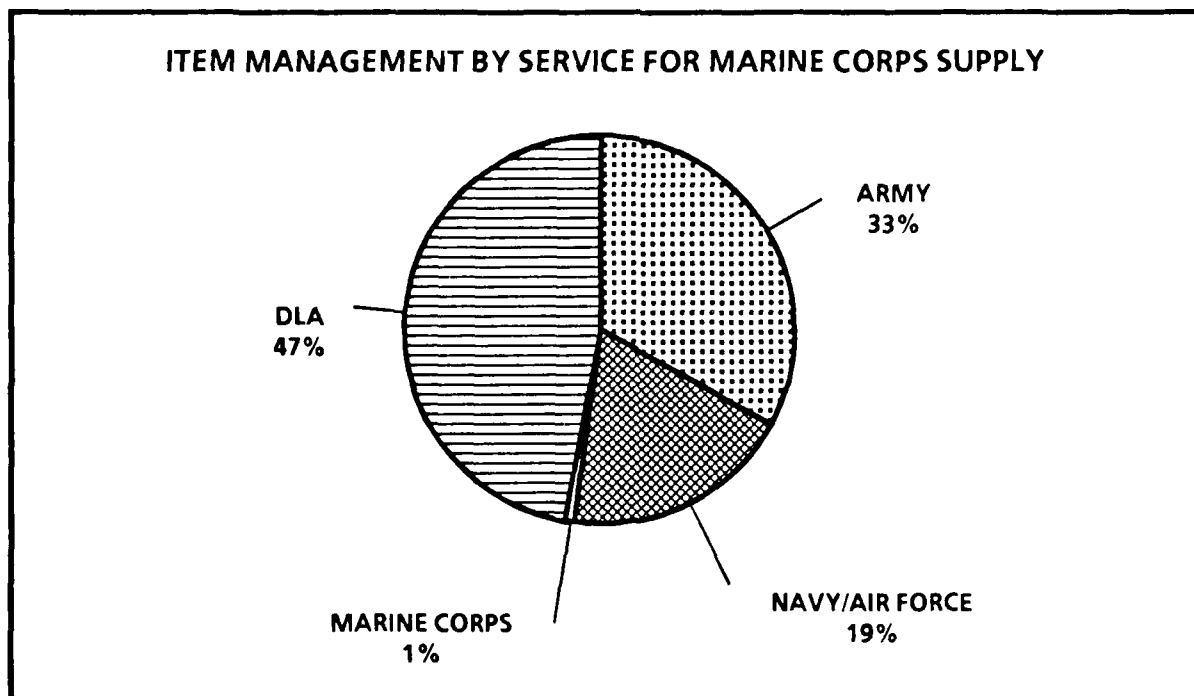


Figure 5-1. Marine Corps Materiel

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The RSAs' general functions are warehousing, customer service, materiel management, physical distribution control, and management of locally controlled items.

5.1.2 Out-of-Stores Element

The out-of-stores element of the Marine Corps supply system is the user and consists of assets held by units of the Fleet Marine Forces, posts, camps, stations, and Marine Corps Recruiting and Reserve Districts. Materiel in this element is not centrally managed. Class IX repair parts stockage levels are based on actual usage and stockage levels for Classes II, IV, and VII are based on table of equipment allowances provided to each unit by HQ MC. Supply accounting for Class II, IV, VII, and IX materiel, including procurement control and disposition of materiel, are performed under the Supported Activities Supply System (SASSY). In support of each division and air wing or combined division wing/team are intermediate supply support elements called SASSY management units (SMU). The SMUs are the connection between the unit level and the ICP or integrated materiel manager. Since SMUs stock materiel necessary to support a unit's prescribed level of operation, the SMUs determine stockage safety levels.

5.1.3 System Operation

The Marine Corps supply system is based on attaining a 60 day level of supply with the exceptions of Class V (managed by HQ MC) and certain DLA restricted items. The 60 day level of supply is held at the Marine Corps Logistics Base (MCLB) and is intended to support and deploy with Marine Corps Air Ground Task Forces (MAGTFs). There are shortfalls in this planned level of support. For example, during Exercise PROUD SCOUT 88, 12,000 requisitions (\$94 million) for shortfalls in the 60 day requirement would have been generated to meet the support levels necessary for the MAGTFs. For Days 61-180, the MCLB computes the materiel requirements for all items and registers them with the proper Integrated Materiel Manager (IMM); however, these requirements are not funded. After the first 60 days, the Marine Corps would submit requisitions to the supply source -- DLA, Army, Navy -- to meet requirements. At that late date, it is highly probable that attempts to "pull" supplies would be met with empty shelves.

Personnel at MCLB identified wartime allocation as the weakest link in the Marine Corps supply system. Any changes in priorities and transportation arrangements are transmitted by messages or phone calls and assume open and available lines of communication. The MCLB relies on HQ MC to provide guidance; in turn, the HQ may receive guidance from the Department of the Navy or directly from the OJCS. The current Marine Corps reliance on manual methods of intervention and on Service/agency sourcing for Days 61-180 argues strongly for in-place apportionment figures for use in wartime allocation.

5.2 FUTURE SYSTEMS/CAPABILITIES

The Marine Corps began a multi-phased, multi-year logistics system modernization project, the Marine Corps Standard Supply System (M3S), in 1976 and awarded the integration support contract in 1985. M3S will eventually replace MUMMS, SASSY, and all subsystems, and is designed to:

- Provide real-time, interactive inquiry capability;
- Reduce printed output by 40%;
- Reduce supply, fiscal, and maintenance personnel training costs by 20%;
- Integrate supply activities with the Marine Corps financial management system (Standard Accounting/Budgeting Recording System);
- Control, if not eliminate, data redundancy; and,
- Reduce the effect of DoD directed changes (e.g. MODELS, DMAS, or DLSS procedure or policy revisions, etc.).

At present M3S is undergoing data definition/standardization at the MCLB, Albany, and conversion of SASSY to a DBMS at the out-of-stores (retail) level. Like most large-scale systems integration projects, M3S is encountering some problems; however, completion (IOC) is still scheduled for 1990 or earlier.

SECTION 6
DEFENSE LOGISTICS AGENCY
ACTIVITIES

6. GENERAL

The Defense Logistics Agency (DLA) has a major and vital role in supply support for the Military Services. The agency currently manages about 2.7 million consumable items of the nearly 5 million items in the Federal Supply Catalog and is responsible for support of the Services' missions in peace and in war. DLA item management responsibility has grown steadily over the past several years, as shown in Figure 6-1. DLA and Service managed shares of all DoD consumable items are depicted in Figure 6-2. DLA receives approximately 30 million requisitions per year (see Table 6-1) and fills about 80% of these directly from assets stocked in the DLA

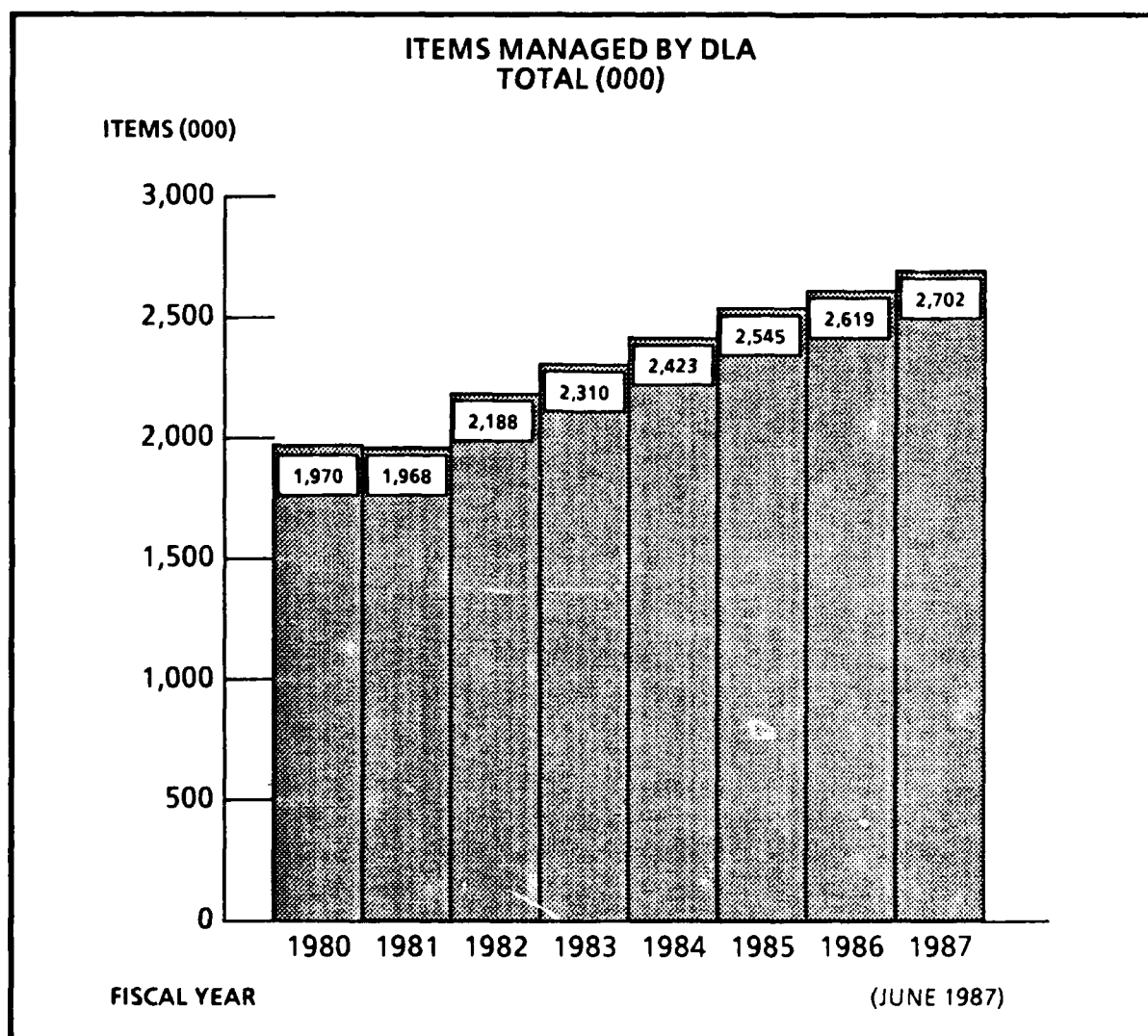


Figure 6-1. Items Managed by DLA

Figure 6-2. Management of Consumable Items in DoD.

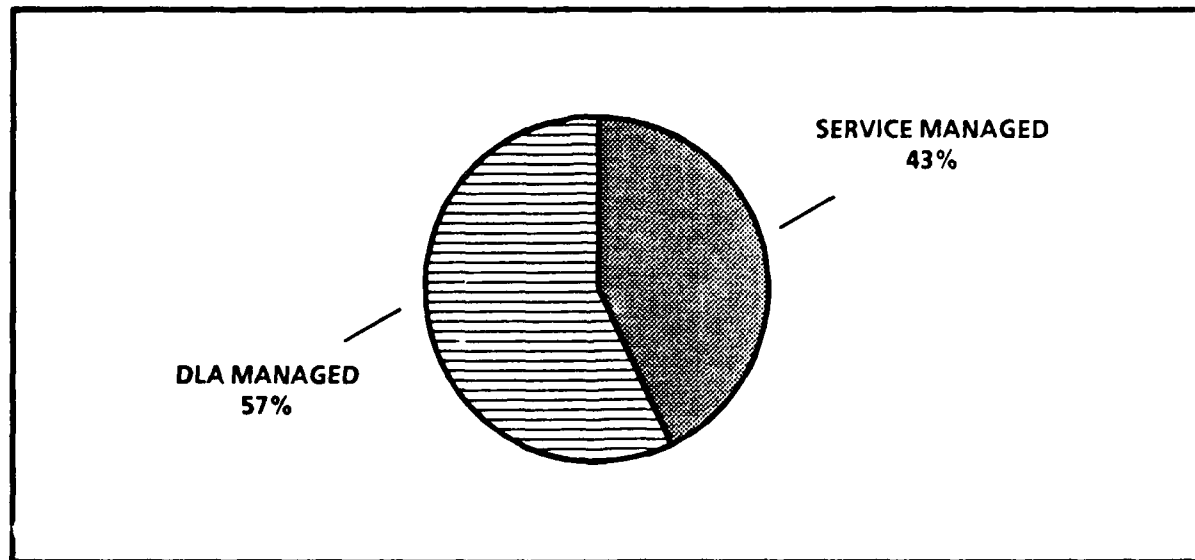


Table 6-1. Requisitions Received by DLA

<u>FY</u>	<u>ARMY</u>	<u>NAVY</u>	<u>USAF</u>	<u>USMC</u>	<u>OTHER</u>	<u>TOTAL</u>
87*	11,525,000	7,207,000	8,896,000	865,000	1,109,000	29,602,000
86	11,032,000	7,487,000	8,791,000	869,000	1,071,000	29,250,000
85	10,990,000	8,508,000	8,978,000	929,000	1,066,000	30,471,000
84	10,765,000	8,703,000	9,259,000	916,000	1,049,000	30,692,000
83	9,963,000	8,140,000	8,956,000	910,000	1,472,000	29,441,000
82	9,298,000	7,789,000	8,828,000	668,000	1,669,000	28,252,000
81	8,904,000	7,557,000	9,339,000	668,000	1,068,000	27,536,000
80	8,673,000	7,288,000	9,321,000	613,000	898,000	26,793,000

*FY87 annualized based on ten months' actual data.

distribution system. In addition, DLA's Defense Fuel Supply Center manages the procurement and distribution of bulk petroleum products for all of the DoD. It is clear that any allocation system for distributing available assets among priority Defense claimants must include DLA as well as the Services themselves.

The Defense Logistics Agency's credo is service to the customer, and the agency has an enviable UMMIPS record in evidence of its success. Because of this driving

goal to support the Services better than they can support themselves, there has been little thought given to the rationing of scarce materiel among many claimants during wartime. Even today, the reaction of some DLA representatives in discussing the distribution of short supplies is that if Service requirements could be established properly with adequate programming lead time, wartime requisitions could be filled as successfully by DLA as they are in peacetime. As desirable as this solution might be, the fiscal likelihood of its achievement is remote.

Like most Service supply systems, the DLA operates a "pull" system to fill requisitions promptly on a first in-first out (FIFO) basis. The automated systems in use today in DLA cannot accommodate allocation. These systems, all ten to twenty years old, were not designed to restrict or selectively direct the flow of materiel. DLA has been successful in intensively managing selected weapon system support items for the Services, but this effort is based primarily on higher safety levels. Most of the responsibility for managing these weapon system related items has been placed on the shoulders of various Item Managers at DLA Centers (Inventory Control Points). The Item Managers, no matter how capable, could not be expected to exercise ration controls over the number of items that might require allocation during wartime. Beyond the physical limitations, Item Managers would also lack information on global requirements or policy implications affecting priorities for available assets.

6.1 CURRENT SYSTEMS/CAPABILITIES

DLA's inventory control and distribution system is managed and operated from six commodity-oriented supply centers or inventory control points, two of which have collocated depots; four defense depots; and twenty-seven additional Service-managed storage locations holding DLA - owned assets. The supply centers are the controlling activities for requirements (developed in conjunction with the Services), procurement, distribution, and maintenance. Table 6-2 lists the DLA supply centers, their locations, and the commodity groups managed at each. The supply centers centrally process requisitions against a national inventory of each item and direct Materiel Release Orders (MROs) to appropriate storage locations for shipment of items to requisitioners. For the most part, these requisitions are processed automatically by computer operated systems at the ICPs and the DLA depots.

Table 6-2. DLA Supply Centers

Defense Construction Supply Center, Columbus, OH Construction commodity group
Defense Electronics Supply Center, Dayton, OH Electronics commodity group
Defense General Supply Center, Richmond, VA General commodity group
Defense Industrial Supply Center, Philadelphia, PA Industrial commodity group
Defense Personnel Support Center, Philadelphia, PA Clothing & Textiles commodity group Medical commodity group Subsistence commodity group

Management of replenishment demand items is based on a categorization of the items by operational criticality or dollar value, as follows:

- (1) Very important program items.
- (2) High value items (\$4,500 and above).
- (3) Medium value items (\$400 to \$4,499).
- (4) Low value items (under \$400).

The items in the very important program category receive the greatest amount of individual management attention, while low value items are almost entirely managed through automated procedures.

6.1.1 SAMMS

The automated system used at the DLA centers for management of and accounting for assigned commodity items is the Standard Automated Materiel Management System (SAMMS). SAMMS operates on large mainframe computers at each center. At present, SAMMS provides on-line inquiry and update capability, some real time interface with other on-line systems, and batch processing. The system performs the functions of inventory maintenance, supply control, financial

management, accounting and billing, procurement and production, and technical cataloging. The system is nearly twenty years old and has been revised in patchwork fashion numerous times.

SAMMS accepts requisition data in card image format from AUTODIN, direct card, direct tape, and remote terminals. Requisitions are validated to assure that the item requested is managed by the receiving center, that the quantity is reasonable, and that shipping and proper billing can be done. Once these actions have been completed and asset availability is determined, SAMMS directs an MRO to the holding depot that is closest to the customer. Figure 6-3 is a highly simplified diagram showing the functions performed by SAMMS in carrying out the integrated

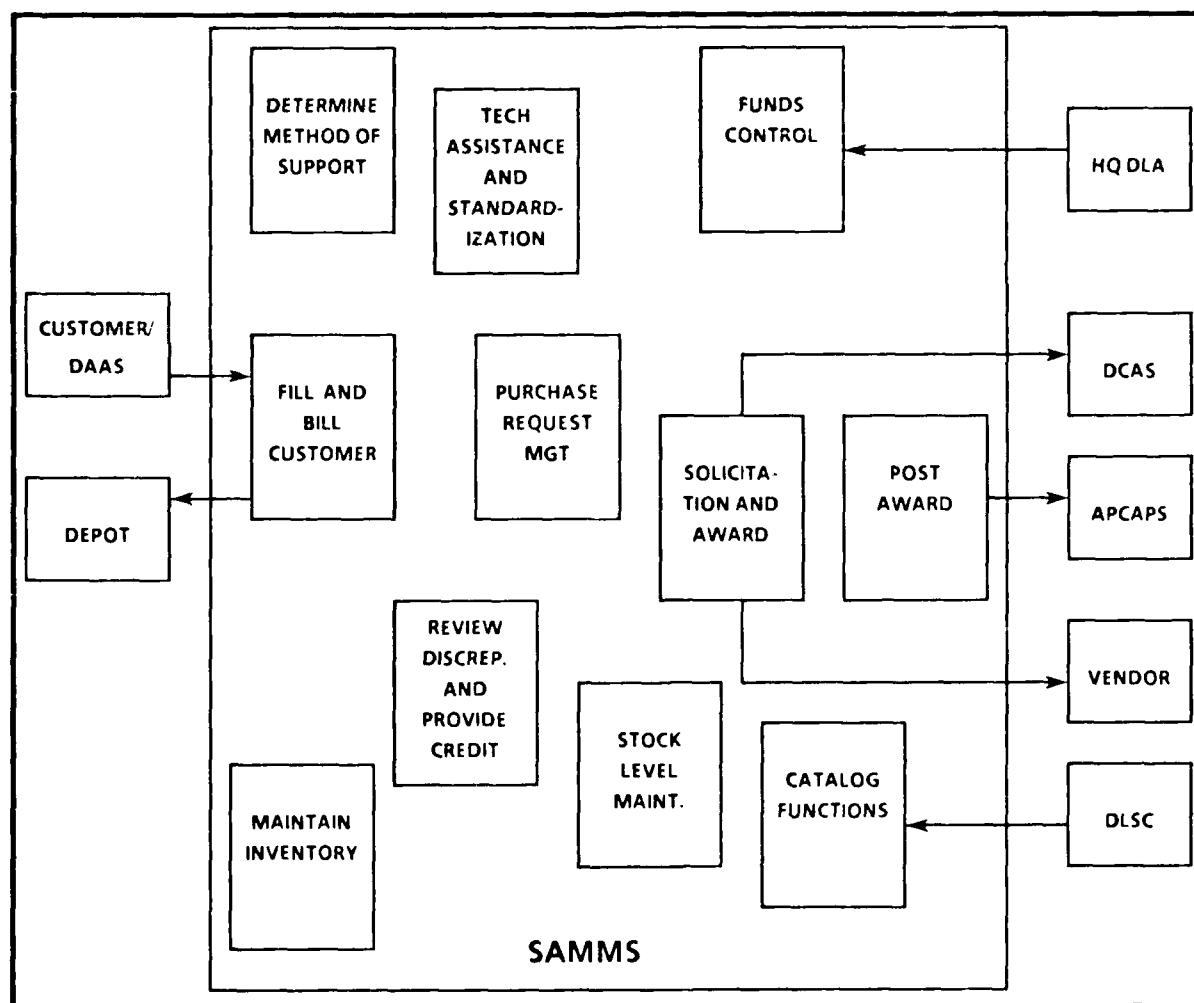


Figure 6-3. DLA Integrated Materiel Management Process

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materiel management process in DLA. When SAMMS assigns assets to fill a requisition, the system then updates inventory control and financial data as well. Should reorder points be penetrated for an item, the SAMMS procurement subsystem takes action to procure replenishment stocks.

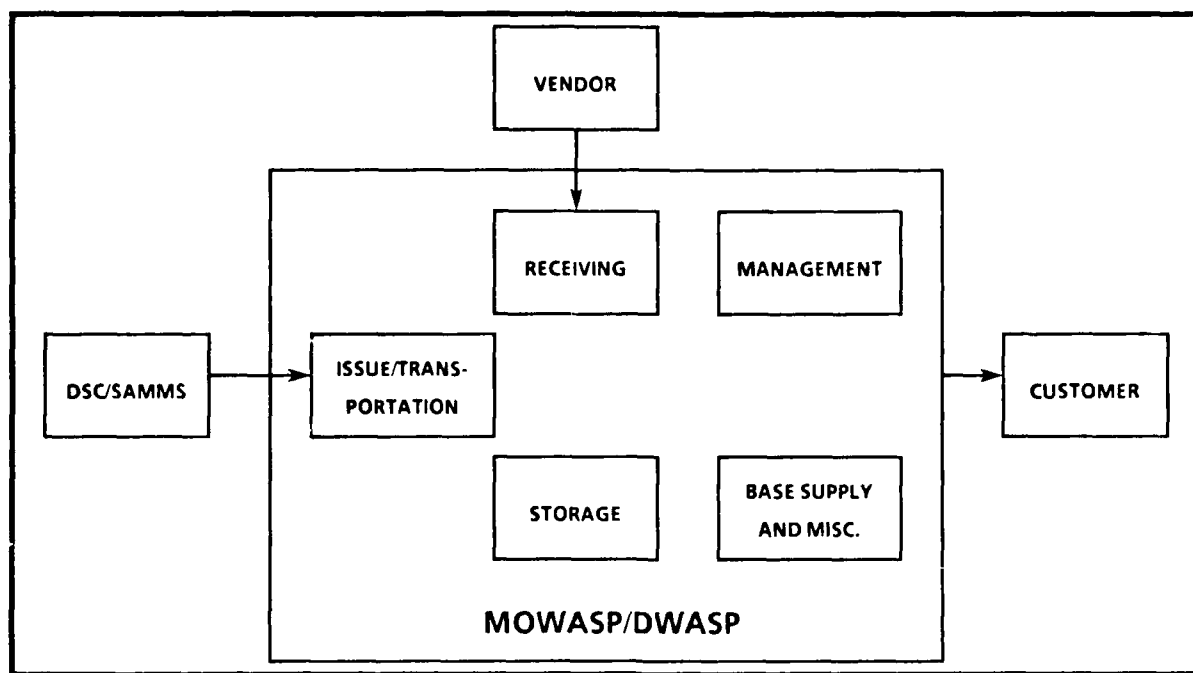
6.1.2 MOWASP/DWASP

The complete materiel distribution process is carried out through an interface between SAMMS and another of DLA's major automated systems, Mechanization of Warehousing and Shipping Procedures, or MOWASP. When a supply center issues an MRO through SAMMS, the MRO is transmitted via AUTODIN to the depot nearest the requisitioner. At the depot, the center's instructions from SAMMS are batch processed in MOWASP for the pick, pack, mark, and ship process. MOWASP creates the documents necessary to carry out each part of the process and the system automatically updates assets status. The MOWASP system is also outdated, and major updating is already underway. The replacement for MOWASP is called the Defense Warehousing and Shipping Procedures, or DWASP. DWASP is being implemented incrementally, with the first increment substantially improving receiving operations already in place at DLA depots. Figure 6-4 shows a simplified display of the functions performed in the current MOWASP/DWASP process. When completed, DWASP will provide extensive Shipping capabilities using LOGMARS bar coding, as well as enhanced Issues and Transportation, Stock Management, and Set Assembly/Disassembly operations.

SAMMS and DWASP together form the backbone of DLA's supply support capability. Both systems are planned for major overhaul as part of the DLA Logistic System Modernization Program that will extend through the 1990's. There have been no efforts to develop system changes to SAMMS that would provide an allocation capability.

6.1.3 Weapon System Support Program

Beyond the established materiel management policies and procedures just described, DLA conducts a Weapon System Support Program (WSSP), documented in DLA Regulation 4140.38. The Services have identified items managed by DLA that are essential to selected weapon systems, and DLA gives increased management attention to those items. Service requests for registration of systems in



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Figure 6-4. DLA Materiel Distribution Functions

the program are submitted to DLA through AMC, AFLC and NAVSUP. Registered systems are categorized as Most Critical (25%), Critical (26%) and Non-Critical (49%). Each of these categories is each further divided into three levels of essentiality codes:

1	Mission Abort
5,6,7	Mission Degradation
Blank or 3	Non-mission Degradation

These items are generally maintenance support items rather than the major components that are still supplied by the Services themselves. Nevertheless, the items are vital to weapon system readiness and are treated by DLA with the same sense of urgency as would be done by the Services that have the requirements.

The scope of the WSSP has grown dramatically since it began. The program now covers almost 800,000 items related to over 1,000 systems and comprises about 48% of DLA's annual demands. A by-Service breakout of currently registered systems is shown in Table 6-3, and growth in items covered is portrayed in Figure 6-5. Part of

Table 6-3. Systems/Categories in DLA WSSP

<u>SERVICE</u>	<u>MOST CRITICAL</u>	<u>CRITICAL</u>	<u>NON CRITICAL</u>	<u>TOTAL</u>
Army	15	19	385	419
Navy	15	45	86	146
Air Force	17	43	98	158
Marine Corps	<u>16</u>	<u>46</u>	<u>222</u>	<u>284</u>
TOTAL SYSTEMS	63	153	791	1,007

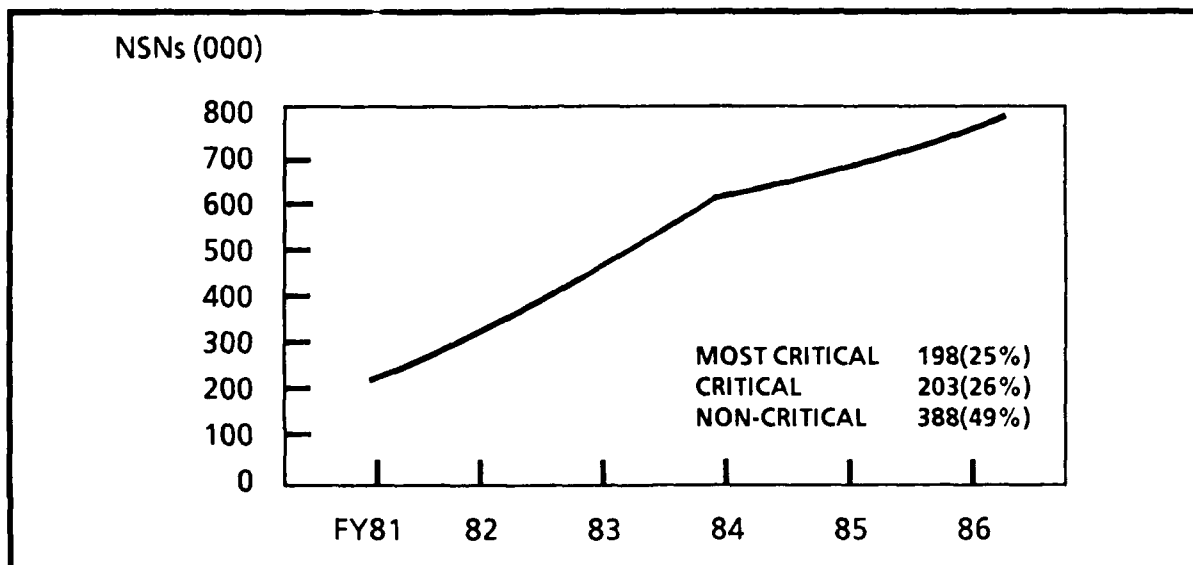


Figure 6-5. Items in DLA WSSP

this growth is due to the approach taken by some Services of registering all reportable end items in the WSSP.

While the WSSP is a methodology for applying more intensive management to selected items, a clear understanding of the limits of its capability is important with regard to the allocation task. The WSSP creates a higher safety level for on-hand assets as the protective device for assuring that requisitions for essential items can be filled. Aside from some planned improvements to the automated inventory management segment of SAMMS that will provide better data for WSSP stockage levels, depth of stock (investment), and storage location, there are presently no plans to add any capability to restrict or redirect the flow of WSSP items. DLA

representatives believe that such a capability could be developed, but it would require considerable system reprogramming.

6.2 FUTURE SYSTEMS/CAPABILITIES

6.2.1 USAMMS

DLA has developed an off-line model called USAMMS that plays wartime requirements against assets and provides comparative results. The model has limitations in size and in the range of analytical data that are generated; however, USAMMS has helped in the development of materiel use rates during mobilization. The USAMMS model was used to assess the impact of Army requirements on DLA assets during Exercise POWDER RIVER 85. An example of the results was that the fill rate for the Medical commodities, Class VIII, dropped from the normal 92-93% to about 55%. This dramatic shortfall in assets is made more troublesome by the fact that Class VIII has traditionally been one of the most responsive of all the DLA commodity groups. With expansion and improvement, USAMMS could be a useful tool in assessing the logistics feasibility of OPLANs.

6.2.2 Logistics Systems Modernization Program

DLA is currently pursuing a Logistics Systems Modernization Program (LSMP) that will affect almost all major data systems now in use. The LSMP encompasses system architecture, individual functional systems design, hardware, software, communications, and processes, and will extend into the 1990's for completion. While the LSMP offers great opportunity for creating an allocation capability in the DLA materiel management and distribution processes, improvements to SAMMS and MOWASP are already underway.

Improvements in SAMMS are planned to include capability to relate investment in weapon system items to weapon system readiness, giving better balance to inventories in relation to their contribution to readiness. Models are also planned to determine optimum locations of stocks in relation to the weapon systems they support, translating into faster response and increased readiness. Enhancements in inventory accuracy and asset visibility will increase control over assets, enabling more rapid response to changing requirements.

The upgrade of the MOWASP depot system to DWASP is in process and, as already indicated, Increment 1 (Receiving) of DWASP has been implemented. The remaining increments will strengthen asset visibility and control through the use of bar coding, automate consolidation of shipments, and allow reconfiguration of shipment units during the issue process.

The changes to SAMMS and MOWASP, including plans to use a shared data base for both, will facilitate allocation. However, much more in system design and programming would be required to include an allocation capability in the DLA materiel management system. Guidance to incorporate an allocation capability will be needed soon, however, so that planning for it can be included in DLA's LSMP. This broad gauge modernization program offers an unusual opportunity to achieve the apportionment/allocation objective for a major portion of the DoD materiel inventory.

6.3 RELATED ISSUES

DLA representatives voiced concern that the allocation issue has been addressed a number of times before and nothing has been done about it. Consequently, there is little optimism that current efforts will be successful. There is also some feeling that any system that requires fairly detailed guidance from the OJCS won't be supportable.

6.3.1 DMAS

With regard to the Defense Materiel Allocation System (DMAS) proposal, DLA has recommended an alternative approach. Essentially, DLA believes the DMAS matrix concept for allocation control is far too complex and detailed to be administered from the JCS level during a crisis. DLA anticipates decisions at that level would be more likely to deal with end items rather than secondary items at either NSN or Federal Supply Class (FSC) level of detail.

The DLA alternative first addresses the matrix for allocation. DLA recommends that attention be focused on items that have a critical supply posture, e.g., items that have backorders, have assets on hand less than the reorder point level, have procurement due-in dates greater than 30 days, etc. The Item Manager would be

tasked to correct supply posture in increments, from most critical to least critical supply posture.

Concerning the allocation variables addressed in the DMAS concept, DLA recommends that:

- (1) Item Managers be instructed to release all requisitions on backorder for Prepositioned War Reserve Materiel (PWRM);
- (2) CINCs be asked to review FAD assignments in their respective theaters and provide comments/recommended revisions to the OJCS. Updated FAD listings would be distributed;
- (3) For limited conflicts, JCS Project Codes be assigned for requirements in support of the specific operation; and,
- (4) Other OJCS/OSD guidance be disseminated as required, such as special instructions on Security Assistance requirements.

As for ICP processing of requisitions, DLA recommends that the Services and DLA be tasked to develop procedures within their systems for establishing and implementing control levels for requisition processing in peacetime and in wartime, e.g., maximum release quantities and UMMIPS control levels for release of assets.

All of these recommended actions would be for contingencies tied to activation of various DEFCON levels and would become part of the DEFCON checklist. Most of these recommendations could be accomplished within the current system.

6.3.2 WRM Requirements

There is some concern in DLA regarding War Reserve Materiel requirements provided by the Services for DLA planning and procurement. Although the requirements are theoretically derived using the same methodology prescribed for all of DoD in DODI 4140.47, there are indications that computations may be based on different techniques of applying the methodology and may be affected by some Services' difficulties in projecting requirements at the NSN level of detail. As the supply support agent for the Services in response to these WRM requirements, DLA has an understandable interest in the foundation for the requirements.

6.3.3 Exercises

Finally, DLA planners believe joint exercises do not put sufficient emphasis on logistics capabilities. There is serious doubt that enough is known about logistics responsiveness and sustainability during a crisis. The overall approach to logistics participation in exercises should be thoroughly re-evaluated.

SECTION 7
RELATED ISSUES

7. GENERAL

While conducting this analysis, the analysts found it necessary to examine in detail several areas not solely devoted to apportionment and allocation but so inextricably related that findings from these areas must be addressed. We believe some of these related issues can be as important to logistics readiness as major findings in apportionment and allocation. Therefore, the reader will see these related issues reflected in conclusions and recommendations.

7.1 REQUIREMENTS GENERATION

There are two major deficiencies in current requirements generation procedures. The first deficiency is the accuracy of identified requirements and the second is the failure to properly identify the total war reserve sustainment requirements. In the former situation, there are some uncertainties which cannot be further refined. The extent and effect of battle damage and the resultant demands for spares or replacement items cannot be computed with any verifiable degree of accuracy since there is no empirical data base from which reliable estimates can be made. While a discernable deficiency, there is no real remedy other than continuing to refine current assumptions as time and experience provide more historical data.

The second identified deficiency, failure to properly identify the total war reserve sustainment requirements, can be corrected. In fact, given currently established DoD logistics procedures, this deficiency simply should not exist. A frequent complaint among logisticians is that other Services do not provide their sustainment requirements to appropriate activities. Our research indicates the Services are providing their war reserve requirements to the appropriate integrated materiel manager (IMM). However, once the IMM and/or the parent Service/agency receives war reserve sustainment requirements, it is unclear as to what is actually done with the information or how the data are processed. There are essentially two "knowns" and one inference that can be described based on information available to date, as follows:

- DoDI 4140.47, "Secondary Item War Reserve Requirements Development", February 24, 1984, announces the policy and procedures to be used for

computation of war reserve materiel requirements (WRMR). The thrust of DoDI 4140.47 is to provide the Assistant Secretary of Defense, Production & Logistics, and the Assistant Secretary of Defense, Comptroller, WRM funding priorities, in dollars, as part of each DoD component's annual Program Objective Memorandum (POM) and budget estimate submission.

- The "Approved MILSTRAP Change Letter (AMCL) 42A, Revised War Materiel Requirement Data Exchange Procedures (PMCL-99)", dated April 10, 1984, provides the specific automated data exchange format for transferring WRMR information from the using component to the appropriate IMM; and further specifies annual data exchanges be completed not later than 15 February, with intervening updates as appropriate. Based on this instruction and information provided by the U.S. Marine Corps Logistics Base, Albany, GA, we are reasonably certain that the using Services are indeed passing their D + 61 to D + 180 WRM requirements to the IMM.

Since the governing DoDI is oriented toward developing budgetary input, considering IMM data and Service logistic planner comments, it would appear the using-Service WRM requirements information is being shunted into POM channels at the IMM/ICP level. This is an inferred conclusion and additional analysis may be warranted. However, the AMCL-42A instruction and requisite WRM requirements data transfers do not include funding authorization. Therefore, the receiving IMM does not have any purchase authority. Further, assuming that the inferred roll-up/dollar-only information is all that is considered during the POM process, any subsequent WRMR funding may not meet real using-Service needs. Since the AMCL-42-directed WRMR input format does not include any prioritization or priority indicators, the IMM has no priority basis for procurement other than that provided routinely by the IMM's parent Service. It is likely that "priority unknown" WRMR are the last considered for procurement or stockage by the IMM. Therefore, it would appear useful for the using Service to prioritize their D + 61 to D + 180 WRMR inputs.

7.2 EXERCISES

In the course of interviewing Service logistics personnel, a number of issues regarding exercises surfaced repeatedly. Predominant was the need to realistically test logistic capabilities. Within individual Services a variety of methods are used to test logistic systems. The Army Materiel Command utilizes the Exercise Capability (EXCAP) system to validate Army pre-positioned automated data used in support of Army Logistics Plans. The Marine Corps Logistics Base (MCLB) uses support tests on competing items; however, test results are acknowledged as questionable because the Marine Corps support requirements are not tested against any other Service requirements. These Service tests, although important to the individual Service, do not provide a realistic assessment of overall logistic support capabilities. This, in turn, may indicate shortcomings in the development of executable operation plans (OPLANs).

The exercise issues raised include:

- More realistic testing of logistic capabilities during exercises, emphasizing Joint exercises where Services/CINCs/theaters would be competing for the same critical assets. Also important is that response cells of the Services, DLA, AFLC, TRANSCOM, for example, be designated to play (to some degree) in CINC sponsored exercises. This would permit more realistic testing of command and support relationships and better test support procedures.
- Joint Materiel Priorities and Allocation Board (JMPAB) participation. For all worldwide or multi-CINC exercises, the JMPAB should be an active player and interface with CINC's/Supporting Commander's Logistics Staffs.
- The need for well-defined pre-exercise planning and post-exercise feedback procedures. Staff at the logistics headquarters commented on the lack of lead-time and, in some cases, the opportunity to develop logistics issues to be played. Another comment referred to exercise after-action reports, which are compiled at Service HQs, often with items "dropped" as the reports are passed up the chain of command. Also, there is a concern that problems with

the automated systems are not being relayed back to the systems personnel and, therefore, are not resolved.

7.3 CRITICAL ITEMS LISTS

7.3.1 CINC's Critical Items List (CINC CIL)

The CINC CIL, established by JCS 2491/561, dated 3 August 1984, is a composite CIL developed from the lists of items that each CINC considers critical to his mission(s) as submitted in the annual CINC situation reports (SITREPs). Guidance for preparation of the fiscal year (FY) 88 CINC CIL required CINC inputs to be identified and prioritized within two categories; major end items and readiness/sustainability items. Major end items are significant weapon or support systems; e.g., F-15, M1-A1. Readiness/sustainability items support major end items and include such materiel as spares, munitions, expendables, and support equipment. Additionally, items submitted must be either currently in production or scheduled to begin production within two years.

OJCS, J-4 uses a computerized ranking methodology to consolidate and integrate the CINC CIL inputs. The methodology determines the relative rank of items by taking into account CINC priorities, the effect of item status on readiness and sustainability, and the significance of the item to OPLAN execution. The result of this process is the composite CINC CIL which has two major sections as noted above; major end items and readiness/sustainability items. The items listed in each section are prioritized. As an indication of scope, the FY 88 CINC CIL (J4M-286-88, dated 22 April 1988) lists 83 major end items and 275 readiness/sustainability items. The FY 88 CINC CIL also sorts and lists items in priority, by Service, according to responsibility for item management.

The primary purpose of the CINC CIL is to assist the Services and DLA in developing their critical items and industrial preparedness planning lists. This is the reason CINC inputs are limited to items currently in production or scheduled to begin production within two years. The CINC CIL also supports acquisition priorities and is the basis for combined US/Canada planning for the North American

Defense Industrial Base. In addition, the CINC CIL is used to determine the precedence of defense industries in the Key Asset Protection Program.

The Director for Logistics, OJCS, J-4, has responsibility for providing guidance to the CINCs for developing their individual items lists and for compiling and staffing the CINC CIL. The J-4 is also responsible for publishing and distributing the final CINC CIL to the Services, DLA, and the individual CINCs.

7.3.2 Service Critical Items Lists

The Services' Critical Items Lists (CILs) contain those items deemed necessary for warfighting. In accordance with DoDI 4005.3 and DoD 4005.3-M, the Service CILs are to be based upon, but not limited to, the CINC CIL. They must be prioritized and must quantify industrial preparedness planning requirements for the items and systems listed.

The Services' CILs are used by each of the industrial planning activities to develop the respective Industrial Preparedness Planning Lists (IPPLs). For example, if the Air Force CIL has an item managed by the Army, then the Army industrial preparedness planner must take the Air Force requirement into account along with the Army's requirements.

The Assistant Secretary of Defense for Production and Logistics has policy level responsibility for the overall DoD Industrial Preparedness Program. In coordination with the Undersecretary of Defense for Policy, he develops industrial preparedness planning guidance annually for the military departments and defense agencies.

7.3.3 Summary

Structuring of the FY 88 CINC CIL into two separate sections that address major end items and readiness/sustainability items is an improvement over previous CINC CILs that tended to address primarily munitions in the highest priorities. The CINC CIL essentially focuses on requirements for OPLAN execution in the early stages of conflict. However, these requirements are not quantified.

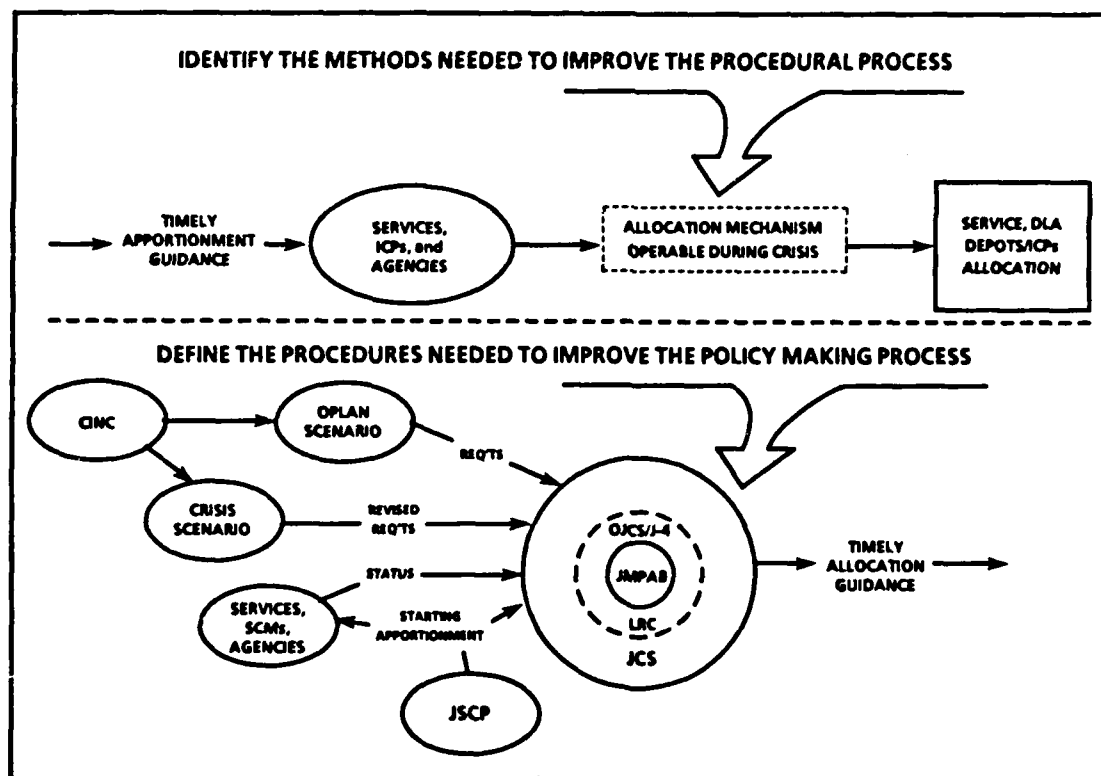
The Service CILs, which are based upon but not limited to the CINC CIL, contain quantified industrial preparedness planning requirements. These are defined as the monthly sustaining rate for D+7 months and beyond. They do not address the D- or M-Day shortfall, consumption, losses, or the production offset (ramp up) from D- to D+7 months.

There is a degree of correlation between the CINC CIL and the Service CILs. However, differences in Service and CINC priorities affect relative prioritization. Further, there appears to be a conceptual disconnect between the CINC CIL and the Service CILs with respect to critical materiel requirements to support operations and force mobilization between D-Day and D+7 months. War reserve stocks and surge production may not be adequate to meet these requirements. The CIL processes do not appear to address the problem of D- to D+7 months requirements.

SECTION 8
CONCLUSIONS
AND
RECOMMENDATIONS

8. GENERAL

This study has provided an opportunity to analyze the elements of materiel management and how those elements should work together to ensure that the composite DoD supply system functions smoothly in peacetime and during crisis or war. Figure 8-1 illustrates the study objectives and the procedural and policy making processes of the supply system. While the individual peacetime supply systems operate with a high degree of effectiveness and efficiency, each logistics activity acknowledges potential problems in attempting to employ current systems during a period of crisis or war. Several efforts are underway to contend with peacetime apportionment and crisis allocation of materiel. Some of those efforts are addressed in conjunction with the conclusions and recommendations of this section.



284-0009

Figure 8-1. Apportionment and Allocation Study Objectives

The conclusions and recommendations (designated a and b, respectively) are divided into three sections:

- Procedural
- Policy
- Service/Agency

8.1 PROCEDURAL

1.a. CONCLUSION: Priority Designators in requisitions are not being monitored.

1.b. RECOMMENDATION: Evaluate alternative methodologies of monitoring Priority Designators, such as:

- Programming the DAAS to reject a requisition with a PD that is inconsistent with the authorized FAD;
- Requiring Services/Agencies to establish this type of edit in their operating systems that generate requisitions; and/or,
- Strengthening UMMIPS educational programs to promote greater priority awareness and sensitivity.

2.a. CONCLUSION: There is no geographic priority system that permits the logistic system to differentiate between equal PDs.

2.b. RECOMMENDATION: Evaluate whether decision logic tables for processing requisitions could be developed based on DODAACs or whether geographically-oriented JCS project codes could be used to establish priority.

3.a. CONCLUSION: Logistic support of allied and friendly forces is not adequately considered.

3.b. RECOMMENDATION: Support the proposed DoD directive on support to and from allied and friendly countries. Pursue

responsibilities assigned to OSD, OJCS, CINCs, and Military Departments.

4.a. CONCLUSION: ICPs have limited ability to assess CINCs' PWRM stocks, except for munitions.

4.b. RECOMMENDATION: Develop guidance to Services on establishing automated data bases for PWRM stocks.

5.a. CONCLUSION: The CINC and Service CILs establish requirements for industrial preparedness planning for sustainment beginning at D+7 months but do not quantify critical materiel requirements to support OPLAN execution from D- to D+7 months.

5.b. RECOMMENDATION: OJCS, in coordination with the CINCs, Services, and DLA, should develop procedures to quantify critical materiel requirements to support OPLAN execution from D- to D+7 months.

6.a. CONCLUSION: JSCP apportionment percentages are useful as sourcing guidance but provide no definitive information to CINCs/Components.

6.b. RECOMMENDATION: Continue percentage guidance; develop methodology for feedback to CINCs on logistics capability to support OPLANs.

7.a. CONCLUSION: JSCP apportionment percentages should be the going-in guidance for wartime allocation.

7.b. RECOMMENDATION: OJCS establish policy that the JSCP will be the baseline guidance for wartime allocation of materiel.

8.a. CONCLUSION: Army "PUSH" packages to support OPLANs may preempt available Army and DLA assets of many items before other Service "PULL" requisitions enter the system.

8.b. RECOMMENDATION: Direct that Services and DLA set aside a percentage of wholesale stocks that cannot be drawn during initial stages of a wholesale crisis without specific approval by JCS.

9.a. CONCLUSION: There is broad agreement that an automated allocation system is needed but that DMAS is too complicated for near-term implementation.

9.b. RECOMMENDATION: Support development of DMAS for implementation in the future in accordance with MODELS development, but propose that the Services and DLA change their own systems to implement stated allocation capabilities within 2 years.

8.2 POLICY

10 a. CONCLUSION: A revitalized program of JCS FAD review and audit is needed to ensure compliance with UMMIPS.

10 b. RECOMMENDATION: OJCS should initiate a comprehensive program to fulfill responsibilities outlined in the revised UMMIPS directive.

11.a. CONCLUSION: There is consensus among Service logistics activities that exercises do not seriously challenge logistic systems or procedures, or highlight soft spots.

11.b. RECOMMENDATION: Focus attention on logistic aspects of JCS exercises and have the JMPAB review logistic guidance and MSEL items before exercise documents are published. Include Service wholesale logistic activities in Joint Exercise Planning Conferences.

12.a. CONCLUSION: Service logistic representatives expect more logistic guidance from OJCS (J-4).

12.b. RECOMMENDATION: OJCS should assume a more active role in logistics support planning, seek stronger links between

CINC and Service logistic plans, and actively participate in efforts to solve major deficiencies such as the need for an allocation system.

13.a. CONCLUSION: There is a need for more continuity in JMPAB involvement in the materiel priorities and allocation processes and in joint exercise planning.

13.b. RECOMMENDATION: The JMPAB should have a more active peacetime role in logistic activities, and the secretariat should have a full time staff member.

8.3 SERVICE/AGENCY

8.3.1 Army

14.a. CONCLUSION: Although the Army Allocation System has some deficiencies, it offers a near-term capability for implementing an automated allocation system.

14.b. RECOMMENDATION: The Army should give priority to development and testing of the Army Allocation system as a means of carrying out JSCP apportionment guidance. The OJCS should strongly support this effort.

15.a. CONCLUSION: Army CILs may not identify items that will be in greatest demand during wartime.

15.b. RECOMMENDATION: Propose that a single Army CIL be developed by the AMC commodity commands.

16.a. CONCLUSION: The 30 day requirement/multi-OPLAN scenario for AMC's EXCAP is not an appropriate gauge for evaluating the capability to support a single major OPLAN.

16.b. RECOMMENDATION: Propose that AMC conduct EXCAP for 60 days' requirements in the next WINTEX/CIMEX (Spring 1989).

8.3.2 Navy

17.a. CONCLUSION: Navy logistics systems are not structured to most effectively support deliberate planning or complement CASREP in crisis response.

17.b. RECOMMENDATION: Propose that the Navy proceed as rapidly as possible with the Logistics Planning and Execution System (LPES). The OJCS should strongly support this effort.

18.a. CONCLUSION: Navy methodologies for computing wartime sustaining requirements are diverse.

18.b. RECOMMENDATION: Recommend that Navy include requirements generation capabilities within LPES, incorporating rapid revision capabilities to support changes in execution.

8.3.3 Marine Corps

19.a. CONCLUSION: The Marine Corps receives no feedback from IMMs on ability to fill USMC WRM requirements.

19.b. RECOMMENDATION: Expand the logistics portion of JCS exercises to test supportability of multi-Service WRM demands.

8.3.4 Air Force

20.a. CONCLUSION: Although changes would be needed, AFLC's MICAP allocation system offers a near-term automated capability for implementing JSCP apportionment guidance.

20.b. RECOMMENDATION: Propose that the Air Staff approve the AFLC DAR on MICAP and direct AFLC to make necessary modifications to support allocation.

21.a. CONCLUSION: Air Force CILs may not identify the items that will be in greatest demand during wartime.

21.b. RECOMMENDATION: Propose that AFLC's WSMIS be used to improve the identification of critical items.

8.3.5 Defense Logistics Agency

22.a. CONCLUSION: DLA's automated materiel management systems, because of age and condition, add risk to the essential support of Service forces.

22.b. RECOMMENDATION: Recommend that DLA proceed rapidly with the Logistics Systems Modernization Program. The OJCS should strongly support this effort.

APPENDIX A
REFERENCE DOCUMENTS

DoD Directives, Instructions, and Manuals

DoDD 2010.8	Depart of Defense Policy for NATO Logistics, 12 Nov 1986
DoDD 3005.5	Criteria for Selection of Items for War Reserves, Dec 1974
DoDD 4000.25	Administration of Defense Logistics Standard Systems, Nov 1983
DoDD 4005.1	Industrial Preparedness Program, Nov 1985
DoDI 4005.3	Industrial Preparedness Program, Apr 1985
DoD 4005.3-M	Industrial Preparedness Planning Manual, Nov 1985
DoDD 4005.16	Diminishing Manufacturing Sources and Materiel Shortages Program, May 1984
DoDD4140.1	Inventory Management Policies, Oct 1956
DoDD 4140.2	Management of War Reserves, Dec 1974
DoDD 4140.17-M	Military Standard Requisitioning and Issue Procedures, Jan 1984 w/C5
DoDD 4140.22-M	Military Standard Transaction Reporting and Accounting Procedures, Jan 1977 w/C15
DoDD 4140.24	Requirements Priority and Asset Application for Secondary Items, Sep 1969
DoDD 4140.26	Integrated Materiel Management of Consumable Items, Jan 1986
DoDI 4140.37	Asset Knowledge and Control of Secondary Items, Aug 1969
DoDI 4140.39	Procurement Cycles and Safety Levels of Supply for Secondary Items, Jul 1970 W/C1

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DoDD 4245.6	Defense Production Management , Jan 1984
DoDI 4400.1	Priorities and Allocations - Delegation of DO and DX, Nov 1971
DoDI 4410.3	Policies and Procedures for the DoD Master Urgency List, Apr 1978
DoDI 4410.3	(Draft) Policies and Procedures for the DoD Master Urgency List (MUL), undated
DoDD 4410.4	Military Production Urgencies System, Aug 1955
DoDD 4410.6	Uniform Materiel Movement and Issue Priority System, Oct 1980
DoDD 4410.6	(Draft) Uniform Materiel Movement and Issue Priority System, undated
DoDI 5000.38	Production Readiness Reviews, Jan 1979
DoDD 5160.54	DoD Key Asset Protection Program (KAPP), Dec 1986
DoDD	(Draft) Support To and From Allied and Friendly Countries During Emergencies, Crises, or Wartime, 14 Apr 1988

OSD

OSD (MRA&L) Memorandum, 4 Mar 1983, subject: Effective Wartime Distribution of Secondary Items

OJCS

DJSM 1915-86, 7 Nov 1986, subject: OJCS Restructuring Directive

FY 1986 Joint Strategic Capabilities Plan (JSCP)

JCS 202/212, Enclosure, Joint Materiel Priorities and Allocation Board Charter, 3 Mar 1982

Army Regulations

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